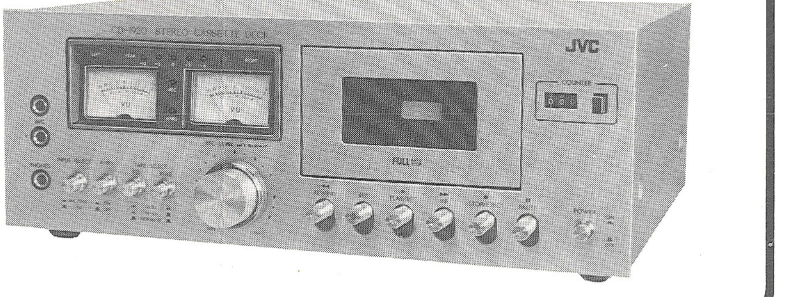
JVC

SERVICE MANUAL

MODEL
CD-1920/A/B/C/E/U
STEREO CASSETTE DECK



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Specifications

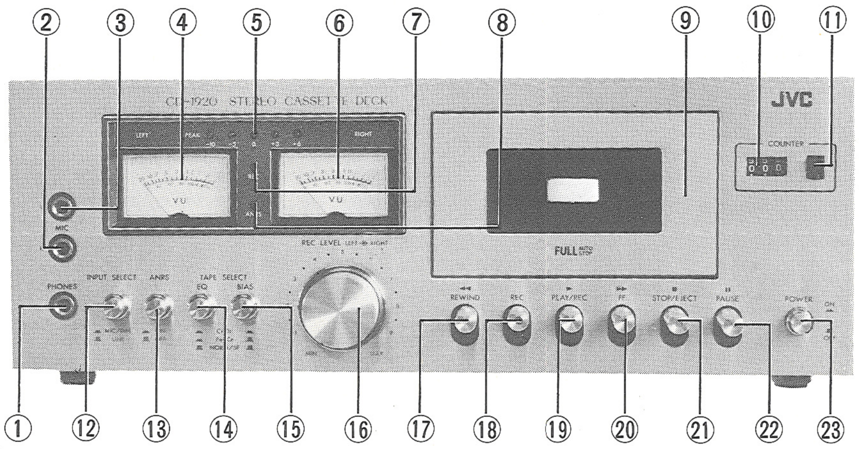
Type	Stereo cassette deck
Track system	4-track, 2-channel
Cassettes	C-30, C-60, C-90
Frequency response	20 – 18,000Hz (30 – 16,000Hz ±3dB) with chrome tape 20 – 17,000Hz (40 – 15,000Hz ±3dB) with normal tape
S/N	52dB (from peak level) The S/N is improved by 5dB at 1kHz and by 10dB above 5kHz with ANRS on.
Wow and flutter	0.09% (WRMS)
Crosstalk	65dB
Harmonic distortion	1.3% (normal tape)
Bias	AC bias (95kHz)
Erasure	AC erasure
Heads	2 heads Hard permalloy head for recording/playback and ferrite head for erasure
Motor	Electronically governed DC motor
Tape speed	4.8cm/sec.
Recording time	2 x 30 minutes with C-60 cassette
Fast forward time	125 sec., with C-60 cassette
Rewind time	125 sec., with C-60 cassette
Semiconductors	7 ICs, 26 transistors, 2 SCRs and 42 diodes
Input jacks	Mic jack x 2 Max. sensitivity 0.2mV matching impedance 600Ω – 10kΩ Input jack x 2 Min. input level 80mV Input impedance 100kΩ
Output jacks	Output jack x 2 Output level 0.3V Output impedance 5kΩ Matching load impedance 50kΩ or more Headphone jack x 1 Output level 0.3mW Matching impedance 8Ω – 1kΩ
DIN connector (REC/PB)	Min. input level 15mV Input impedance 10kΩ Output level 0.5V Output impedance 5kΩ Matching impedance 50kΩ or more
Power requirement	AC 120V, 60Hz (CD-1920/C) AC 240V, 50Hz (CD-1920A/B) AC 100V,120V,220V, 50Hz (CD-1920E) AC 100V,120V,200V,220V 50/60Hz (CD-1920U)
Power consumption	30W
Dimensions	Width; 15-3/8" (390mm) Height; 5-15/16" (151mm) Depth; 12-5/8" (321mm)
Weight	15.8 lbs. (7.2kg)

Design and specifications are subject to change without notice.

Features

"Vertical-open-view" cassette deck
Multi-point peak level indicators
ANRS Integrated Circuit
ID (Independent Drive) mechanism
Full auto stop
Air-damped cassette door (Pat. pending)
Input select switch
Tape select switches

Controls and Connections


②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
CD-1920 STEREO CASSETTE DECK
JVC
LEFT
PEAK
RIGHT
VU
VU
COUNTER
MIC
PHONES
INPUT SELECT
ANRS
TAPE SELECT
EQ
BIAS
REC LEVEL
FULL AUTO STOP
REWIND
REC
PLAY/REC
FF
STOP/EJECT
PAUSE
POWER
①
⑫
⑬
⑭
⑮
⑯
⑰
⑱
⑲
⑳
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㉓

Fig. 1

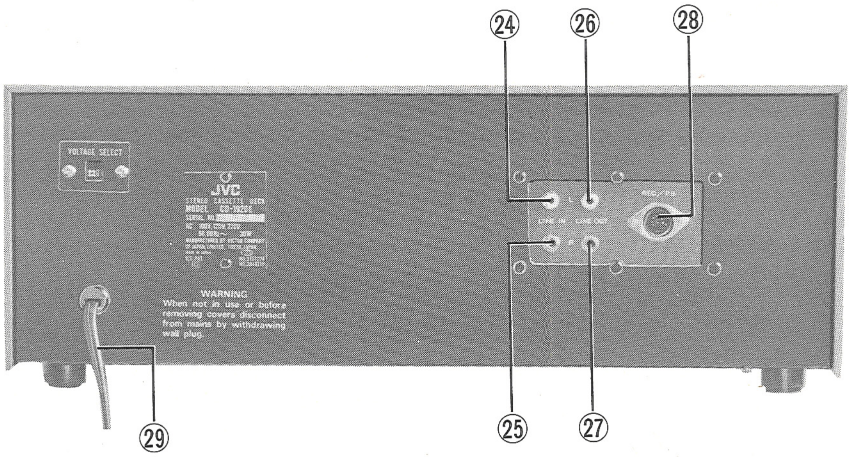

㉔
㉖
㉘
VOLTAGE SELECT
JVC
STEREO CASSETTE DECK
MODEL CD-1920E
LINE IN
LINE OUT
REC/PB
WARNING
When not in use or before removing covers disconnect from mains by withdrawing wall plug.
㉙
㉕
㉗

Fig. 2

1 Headphone jack (PHONES)
2 Right channel microphone jack (MIC-R)
3 Left channel microphone jack (MIC-L)
4 Left channel level meter
5 PEAK level indicators
6 Right channel level meter
7 REC indicator
8 ANRS indicator
9 Cassette door
10 Tape COUNTER
11 Counter reset button
12 INPUT SELECT switch
13 ANRS switch
14 TAPE SELECT EQ switch
15 TAPE SELECT BIAS switch
16 REC-LEVEL controls
17 Rewind button (REW)
18 Record button (REC)
19 Play button (PLAY/REC)
20 Fast forward button (FF)
21 STOP/Eject button (STOP/EJECT)
22 Pause button (PAUSE)
23 POWER switch
24 Left channel LINE IN terminal
25 Right channel LINE IN terminal
26 Left channel LINE OUT terminal
27 Right channel LINE OUT terminal
28 DIN socket (REC/PB)
29 Power cord

Main Parts Location

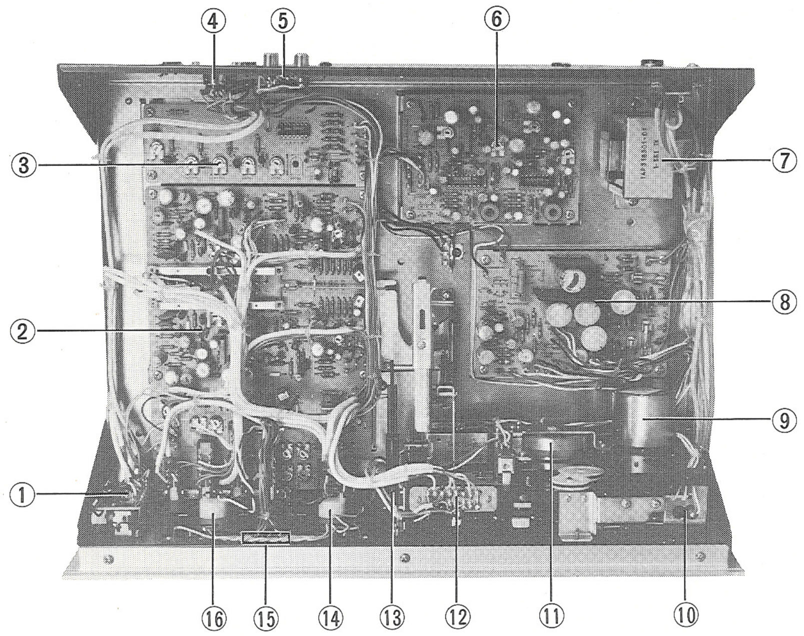


Fig. 3

1	MIC jack circuit board
2	Main amp circuit board
3	Peak level circuit board
4	DIN jack
5	PIN jacks
6	ANRS circuit board
7	Power transformer
8	Power supply circuit board
9	Motor ass'y
10	Cds lamp
11	Flywheel ass'y
12	Head wire terminal circuit board
13	Air-damp pipe
14	Level meter (Right)
15	Indicator circuit board
16	Level meter (Left)

New Technique

The multi-point peak level indicators let you know the precise levels of the peak signal pulses that the mechanical VU meters cannot follow. They are essential aids for making good recordings, for they allow recording at maximum levels without exceeding the magnetic saturation level of the tape. During adjustment, sine waves are used and the indication of the VU meters corresponds to that of the peak level indicators. But, for ordinary musical signals, the VU meters usually indicate lower values because of their slower response.

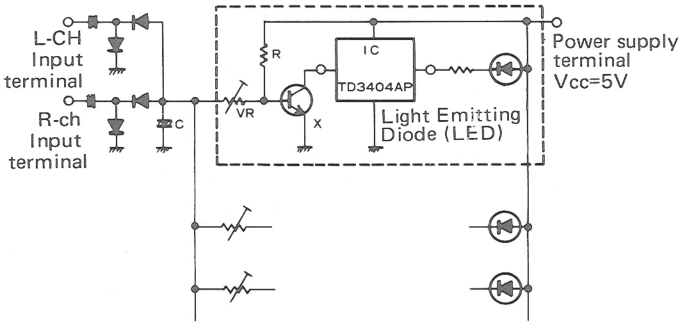


Fig. 4

The left and right channel inputs are individually rectified and the capacitor C is charged by the higher of the left and right channel signal levels. The variable resistor VR adjusts the lighting level of the LED. When no input signal is available, the transistor X is conducting because base current is applied through the resistance. At this time the output terminal of the IC TD3404AP is at a high level (5V), providing no current to the LED, which does not light up. When the base potential of the transistor X is reduced to below 0.6V by the input signal, X becomes non-conducting, the IC output is at a low level (0V) and current flows to the LED and lights it up.

The multi-point peak level indicators consist of five of the circuits encircled by the broken line, connected in parallel. Each of the VRs is adjusted according to the signal level at which the LED lights up to indicate.

A circuit which, with high level inputs, provides low level outputs and vice versa, such as TD3404AP, is usually called an inverter. This IC TD3404AP, widely used in computers, is a digital IC which includes six such inverter circuits, five of which are used in this set.

For easy use, the peak level indicator circuit of this set is so designed that the higher one of the right and left channel signal levels is detected to light the LED. The attack time is established at about 4msec, achieving both easy visibility and indication accuracy.

For adjustment, see the section "ADJUSTMENTS" on page 7.

Main Parts Removing

This cassette deck which features a compact design and high performance uses minuature-sized parts which are closely arranged. Use special care when servicing it.

Enclosure Assembly

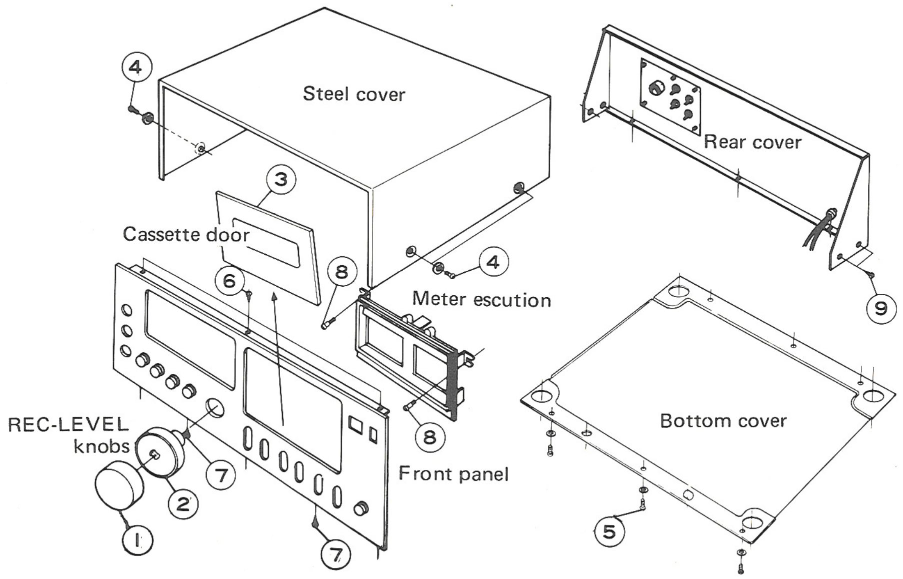


Fig. 5

Parts Name	Procedure	Ref. No.	Remarks
REC LEVEL control knobs	Pull off the inner knob and the outer ring to front side.	① ②	Inner knob – for left channel Outer ring – for right channel
Cassette door	1. Press the EJECT button to open the cassette door. 2. Remove the cassette door by sliding it upward.	③	• When the cassette door be removed, can easy clean or demagnetize the head. • When replace the cassette door, insert it that ball bearings be full locked.
Steel cover	Remove 2 screws and washers of both sides (L & R).	④	Almost all parts of circuit board can be checked when only steel cover is removed.
Bottom cover	Remove 6 screws and 6 washers fastening the bottom cover.	⑤	• 3φ 8mm screws • Almost all pattern side of circuit board can be checked when only bottom cover is removed.
Front panel	1. Remove 3 tapping screws fastening up side of the F. panel. 2. Remove 2 tapping screws fastening under side of the F. panel.	⑥ ⑦	Remove the front panel after removing the steel cover and bottom cover.
Meter escution	Remove 2 screws (L and R side of upward) fastening the meter escution.	⑧	Remove meter escution after removing the front panel.
Rear cover	1. Remove 3 screws fastening the bottom cover. 2. Remove 2 screws (L and R side of under side) fastening the rear cover.	⑨	

Electrical Parts

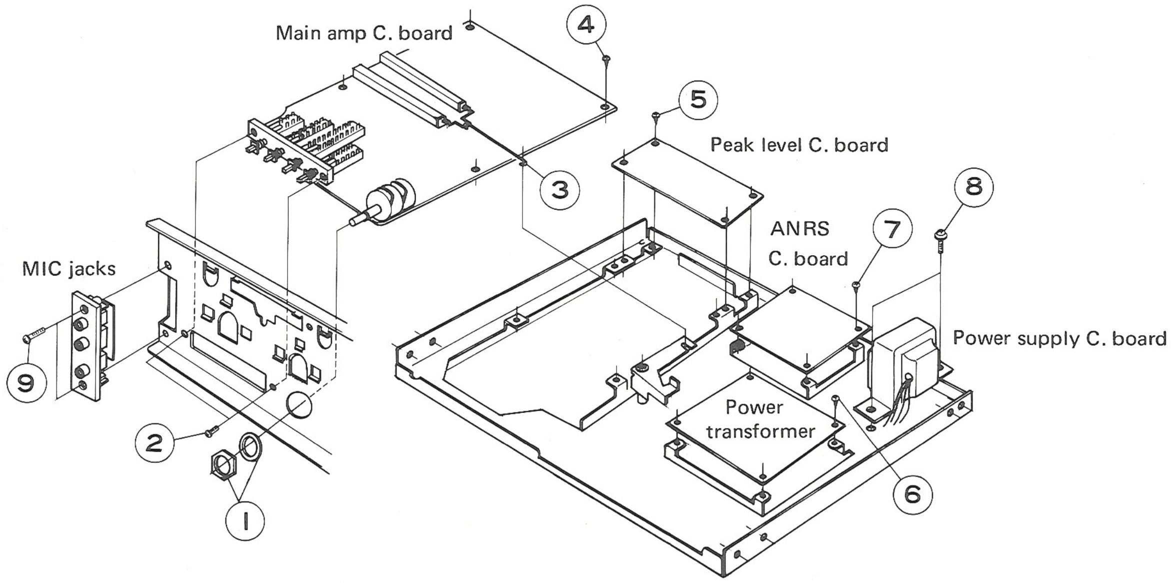


Fig. 6

Parts Name	Procedure	Ref. No.	Remarks
Main amp circuit board	1. Remove 2 screws fastening the switch ass'y. 2. Remove rod of the recording lever. 3. Remove 4 tapping screws fastening the main amp circuit board.	② ③ ④	Remove the main amp circuit board after removing the front pan
REC volume	Remove washer and nut of the V. Resistor shaft fastening the front bracket.	①	Remove the V. Resistor after removing the front panel.
Peak level C. board	Remove 4 tapping screws fastening the peak level C. board.	⑤	
Power supply C. board	Remove 4 tapping screws fastening the power supply C. board.	⑥	
ANRS C. board	Remove 4 tapping screws fastening the power ANRS C. board.	⑦	
Power transformer	Remove 2 screws and washers fastening the power transformer.	⑧	
MIC jack ass'y	Remove 2 screws fastening the MIC jack ass'y.		The left side of front bracket.

Mechanical Parts

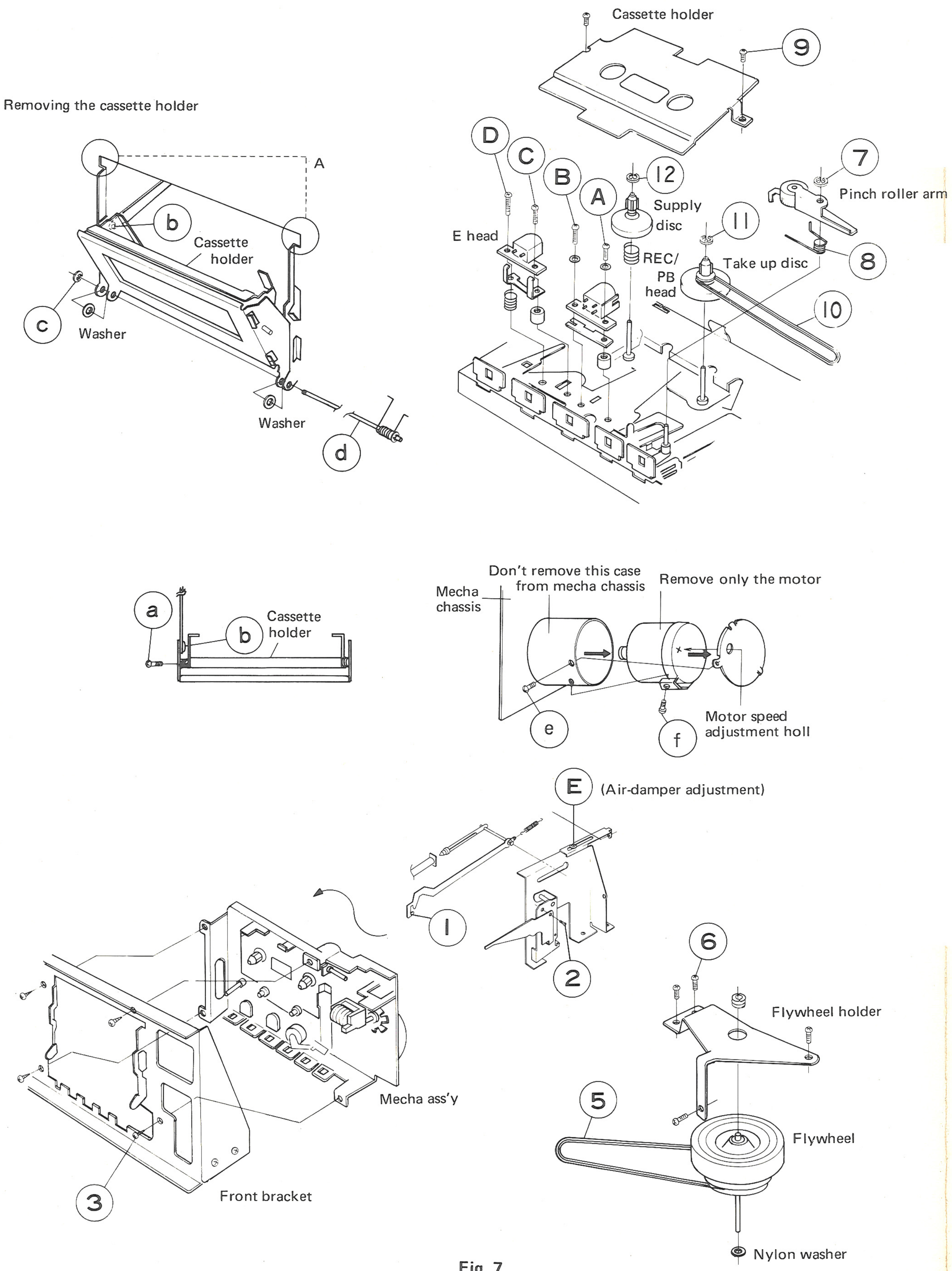

Removing the cassette holder
Cassette holder
9
D
C
B
A
12
Supply disc
7
Pinch roller arm
E head
11
REC/PB head
Take up disc
8
10
A
b
Cassette holder
c
Washer
Washer
d
a
b
Cassette holder
Don't remove this case from mecha chassis
Mecha chassis
Remove only the motor
e
f
Motor speed adjustment holl
E
(Air-damper adjustment)
1
2
6
Flywheel holder
Mecha ass'y
5
Flywheel
3
Front bracket
Nylon washer

Fig. 7

Parts Name	Procedure	Ref. No.	Remarks
Mecha-ass'y	1. Press the EJECT button, then the cassette door be loaded Remove the brake arm ① from stud of cassette holder. 2. Remove a screw ② fastening the recording arm. 3. Remove 4 screws fastening the front bracket. 4. Pull off the mecha-ass'y to back side.	②① ③	When the brake arm remove, be carful not to stain the "O" ring and don't less grease.
Cassette holder	1. Remove a screw fastening the cassette holder. 2. Remove "E" ring holding the brake arm. 3. Remove "E" ring holding the shaft. 4. Pull off the shaft to right side. 5. Remove the cassette holder by sliding it upward on A position of panel bracket.	ⓐ ⓑ ⓒⓓ	When replace the cassette holder, don't forget 2 washers of the shaft.
Motor	Don't remove the motor case from mecha chassis and remove the motor only, you can be easy replaced it. 1. Remove the take up belt. 2. Remove the capstan belt. 3. Disconnect 2 wires of motor. 4. Remove a screw fastening the bottom plate of motor. 5. Remove a screw fastening the transistor. 6. Press the motor from upward (pully side), then can be removed the motor.	⑤ ⓔ ⓕ	Be carful not to stain the belt.
Flywheel	1. Remove 2 screws fastening the muting SW bracket. 2. Remove the capstan belt. 3. Remove 4 screws fastening the flywheel holder. 4. Pull off the flywheel.	⑥	Be carful no to stain the belt. When replace the flywheel, don't forget to insert a nylon washer to it's shaft.
Pinch roller arm ass'y	1. Remove "E" ring holding the pinch roller arm ass'y. 2. Remove spring on the arm ass'y.	⑦ ⑧	
Take up disc	1. Remove 2 screws fastening the cassette holder. 2. Remove the counter belt. 3. Remove "E" ring holding the take up disc. 4. Pull off the disc from the shaft.	⑨ ⑩⑪	
Supply disc	1. Remove the cassette holder. 2. Remove "E" ring holding the supply disc. 3. Pull off the disc from the shaft.	⑨⑫	

NOTE: 1. Don't dirty, slippery and undue run-out the capstan belt and counter belt.
2. Adjust height of the motor pulley, when the capstan belt connect to the flywheel from the motor, pulley, so that it will be parallel to the chassis.

Adjustments

Electrical Adjustment

Equipment and measuring instruments used for adjustment.

1. V.T.V.M. (measuring AC in millivolt)
2. Audio-frequency oscillator
   (range: 50–20kHz and output 0dB with impedance 600Ω)
3. Attenuator
4. Reference tapes for REC/PB
   TS-1 (QP-12, C521V) – normal tape
   TS-2 (TP-18, C401R) – chrome tape
5. Reference tapes for playback
   VTT-664 (1kHz 16mM)
   VTT-666 (400Hz 22mM)
6. Resistors
   100Ω (for measurement of the bias current)
   600Ω (for attenuator matching)

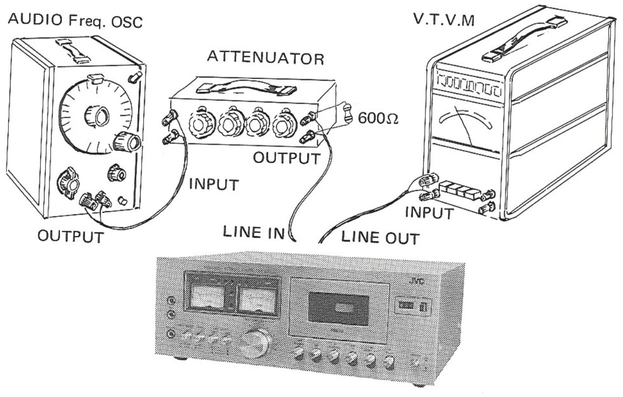


Fig. 8

No.	Item	Procedure	Part	Rating	Remarks
1.	Level meter deflection	1. Set the deck in the record mode, and set INPUT SELECT switch at LINE IN. 2. Input 1kHz signals (about 10dBs) from LINE IN jacks and adjust volume control so that test points $\boxed{12}$ and $\boxed{62}$ are −3dBs. 3. Adjust semi-fixed resistors VR103 and 203 in this condition it obtain zero VU meter reading.	(Main amp C. board TAA305204) VR103,203		The angle of meter deflection has been factory-adjusted, but should be adjusted when parts are replaced. When adjust the level meter, don't use a headphone.
2.	Peak level	1. Set as same mode at step(1) and adjust semi-fixed resistor VR703 so that the "0" indicator is lighting and no lighting at −1dB from step(1) with attenuator. 2. Adjust semi-fixed resistor VR704 so that the "−5" indicator is lighting at −5dB from step(1) with attenuator. 3. Adjust semi-fixed resistor VR705 so that the "−10" indicator is lighting at −10dB from step(1) with attenuator and no lighting at −11dB from step(1) with attenuator. 4. Adjust semi-fixed resistor VR702 so that the "+3" indicator is lighting at +3dB from step(1) and no lighting at +2dB from step(1) with attenuator. 5. Adjust semi-fixed resistor VR701 so that the "+6" indicator is lighting at +5dB from step(1) with attenuator.	(Peak level C. board TAA305306) VR703 VR704 VR705 VR702 VR701		
3.	Playback sensitivity	1. Set equalizer switch at normal and playback reference tape VTT-664. Adjust semi-fixed resistors VR101(L) and VR201(R) so that test points $\boxed{12}$ and $\boxed{62}$ are −3dBs, then level meters indicate zero VU (about 0.3V at LINE OUT). 2. Playback reference tape VTT-666 and check that the VU meter indicate CAL.	(Main amp C. board VR101,201	−3dBs zone of CAL mark	1. Adjust playback sensitivity when heads are replaced. 2. Make this adjustment after making sure level meter deflection angle is correct.
4.	Bias current	1. Insert a 100Ω resistor into the ground side wiring of the head and connect the V.T.V.M. across the resistor, and set the BIAS SW at chrome or normal. Set the deck in record mode. Input signals to LINE IN jacks and adjust the recording level control so that the test points $\boxed{12}$ and $\boxed{62}$ are −13dBs. First adjust for chrome tape, then for normal tape. 2. After the deck correct the head wires, input the standard level of 1kHz signals to use reference tape, and measure REC/PB frequency response at 10kHz. 3. Adjust semi-fixed resistors VR502,504 (chrome) 501, 503(normal) so that the 10kHz frequency response does become ±10dBs Repeat the recording and playback so that 10kHz signals become correct frequency response. Level over at 10kHz compared with 1kHz – bias current less Level less at 10kHz compared with 1kHz – bias current over	chrome VR502,504 normal VR501,503	chrome 55mV normal 45mV	1. Adjust bias current when heads or other parts are replaced. 2. Use the highclass V.T.V.M. for high frequency response. 3. After the bias current adjustment, check the frequency response at 10kHz signals.
5.	Recording signal current	1. Set the deck in the record mode. 2. Input the 1kHz signals to LINE IN jacks and adjust the recording level control so that the test points $\boxed{12}$ and $\boxed{62}$ are −13dBs, make recording in such a way. 3. Adjust the semi-fixed resistors VR104, 204(chrome), VR105,205(normal) so that the test points are −13dBs.	(Main amp C. board) chrome VR104,204 normal VR105,205		1. This adjustment is necessary when heads are replaced. 2. Make this adjustment after adjusting steps (1) through (4). 3. Check the frequency response at 10kHz after this adjustment. 4. Set EQ and BIAS switches according to type of tape used.
6.	ANRS circuit (DC bias)	1. Disconnect +B of bias circuit so that oscillator does not operate. (Desolder the BIAS CUT in main amp circuit board) 2. Set the deck in the record mode. 3. Apply signal of 1kHz to LINE IN and adjust volume control so that test points $\boxed{12}$ and $\boxed{62}$ (in main amp circuit board) are 0dBs. 4. Then, connect the V.T.V.M. to test points ⓗ Ⓗ in main amp circuit board and adjust below steps. 5. Apply signal of 1kHz, −40dB to LINE IN and adjust R401,401 so that LINE OUT is −34.3dB with ANRS ON. 6. Apply signal of 5kHz +40dBs to LINE IN and adjust R302,402 so that LINE OUT is −17.5dBs with ANRS ON. 7. When apply signal of 1kHz to LINE IN and output is 0dB, adjust steps (5) through (6) so that level does not change when ANRS is turned on and off (±5dB less). 8. Playback reference tape VTT-664 and check LINE OUT level so that it's compare are ±1dB less with ANRS SW on to off. 9. Connect +B of bias circuit (Solder the printed in main amp circuit board for connect +B).			1. See figure of ANRS circuit. 2. Repeat steps (5) through (6). Step (5) is 5.7dB up. Step (6) is 2.5dB up.

Trouble Shooting Guide

Mechanical Adjustment

1. Replacement and adjustment of the head
(See Ⓐ Ⓑ Ⓒ Ⓓ in Fig. 7 of page 6)

If either of the record/playback head and the erase head shown low performance because of wear, broken wire or excessive magnetization, it should be replaced.

Part	Screws to be removed
REC/PB head	Ⓐ, Ⓑ
E head	Ⓒ, Ⓓ

REC/PB head

After replacement, adjust the head for azimuth.

1. Insert the cord plug into the LINE OUT jack (or REC/PB), and connect the other end of the cord to a V.T.V.M. (vacuum tube voltmeter).
2. Play the azimuth adjustment test tape (e.g. JVC's VTT-653, 10kHz).
3. Turn the azimuth screw Ⓑ so that the output will become maximum.
   If the azimuth adjustment test tape is not available, play a music cassette.
   When treble response becomes optimum, set the adjustment screw Ⓑ.
4. After this adjustment, the screw Ⓑ should be locked with a bond.

If necessary, adjust playback sensitivity, REC bias current, REC signal current and bias trap.

Erasing head

After replacement, adjust the head for height position.

1. Play the test tape (C-120).
2. Turn the adjustment screw Ⓓ so that the test tape move running to no touch the tape guide tip (up or under side).

If checking is difficult, cut front upper side of the cassette of C-120 by a cutter knife, etc., then can easy check it.

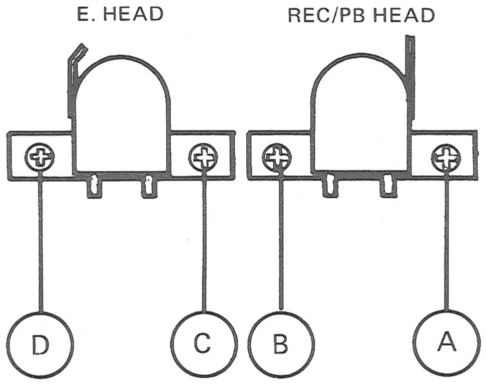


Fig. 9

2. Adjusting the motor speed

1) Play back reference tape (3000Hz), and adjust the semi-VR in the motor that it's speed in 3000Hz±2% (2970Hz~3060Hz).
2) CD-1920 need not to change cycle, whether the commercial frequency in your area is 50 or 60Hz.

[ELECTRICAL CIRCUIT]

1. Playback tone quality is poor.

1. Check the record/playback head for dust.
2. Check the record/playback head for wear.
   If worn excessively, the loss of treble response will result.
3. Check wiring for a short-circuit.
   Check each transistor for condition.

2. Recording tone quality is poor.

The playback tone quality of a recorded tape such as the audition tape is good, but the recording by this unit produces poor tone quality. In this case, the unit should be checked in the following manner.

1. By monitoring a music while recording, check the tone quality.
2. If found poor, check the wiring of the recording system for a broken wire and short-circuit.
3. If no irregularity is found, check the recording bias current. Also check the oscillation circuit.

3. For other failures, check the unit in the same manner as other amplifiers.

3. Standard torque

Fast forward torque	70 gr-cm or more
Rewinding torque	70 gr-cm or more
Take-up torque	35~70 gr-cm

4. Door opening speed adjustment
(See Ⓔ in Fig. 7 of page 6)

Door opening is opened slowly by screw E is loosened and move the bracket position to back side. (The spring tension varies strong)

[MECHANISM SECTION] (wow and flutter)

If wow and flutter increase, check the following points.
If there is defect in revolving parts, the wow and flutter generated will increase in proportion to the number of revolutions.

Play a 3000Hz test tape, and defective part can be detected from the sound.

Section	Trouble	Repair
Capstan and flywheel	Capstan shaft has excessive run-out. Flywheel turns heavily. (shaft seisure, thrust play, etc.)	Replace flywheel. Adjust plastic screw with flywheel holder. Clean the capstan shaft and the groove in the flywheel. Apply oil to the metal position. Replace the capstan assembly.
Pinch roller	Rough rotation (Deformation scratches, or dust). The angular position of the pinch roller is not correct. The pinch roller pressure is not correct.	Replace pinch roller. Clean the pinch roller or apply oil to the rotary shaft. Adjust the pinch roller so that it is parallel with the capstan shaft. Adjust the pinch roller spring.
Belt	Belt has undue run-out. Belt is dirty or slippery.	Clean the belt or remove the distortion. Replace the belt.
Back tension	Back tension is irregular, or back tension is too strong.	Replace supply disc. Replace back tension spring (under supply disc), or apply silicon grease.
Motor	Motor shaft has undue run-out. Motor pulley is oily and dusty.	Replace motor. Clean motor pulley.
Take-up idler arm	Pulley has deflection. Pulley is stuck.	Replace take-up idler arm.

[MECHANICAL REPAIRS]

Section	Trouble	Repair
Take-up idler arm	Standard take-up torque not available.	Replace take-up idler arm. Replace take-up idler arm pressure spring. Clean or replace capstan belt. Clean rubber rim of the right reel.
Reel disc and idler	Fast-forward torque not available.	Clean rubber rim of the right reel or replace reel disc assembly. Clean or replace fast-forward idler. Clean rubber rim of the left reel or repalce reel disc assembly. Clean rewind idler tire.
Door brake	Door does not open fully.	Apply a small quantity of silicon grease to the inside surface of the brake pipe. (SHIN ETSU KAGAKU KS-64 or equivalent)
	Braking not sufficient.	Replace brake pipe or rubber O-ring.
Auto-stop mechanism	Auto-stop not operating.	Check slide lever and solenoid iron core for smooth movement. Check if the locking and sliding parts of the operation button cam are well coated with molybdenum.

Maintenance

To get long, trouble-free service, maintenance is important. Do not forget cleaning and demagnetizing.

Cleaning

After long use, the heads and tape part – capstan, pinch roller, etc. – will become dirty with dust or magnetic particles. Dirty heads cause imperfect erasing or high frequency drop-off. A dirty capstan and pinch roller will cause unstable tape speed, leading to increased wow and flutter.
Always keep them clean by following the procedure below.

1. Heads

1) Press the EJECT button with the POWER switch OFF to open the cassette door.
2) Remove the cassette door by sliding it upward.

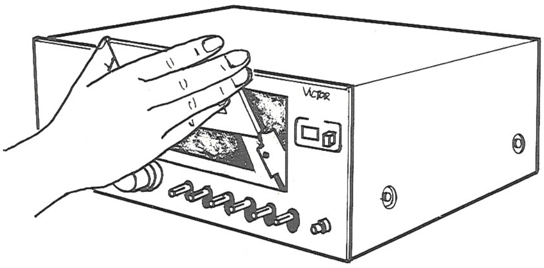


Fig. 10

3) Press the PLAY button to move the heads out.
4) Use the head cleaning stick provided to wipe the surface where the tape comes into contact with the head.
   (It is effective to moisten the cotton with alcohol.)

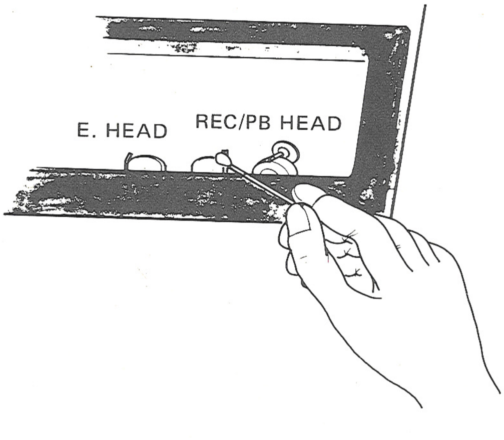


Fig. 11

2. Pinch roller and capstan

1) Press the EJECT button with the POWER switch ON to open the cassette door.
2) Press the PLAY button, and the pinch roller will move out and rotate.
3) Apply a soft cloth (soaked in alcohol, it will be more effective) to the rotating pinch roller and capstan.
   Be careful not to let the cloth get caught!
   * Do not use any cleaner besides alcohol or a specifically prepared tape head cleaning solution.

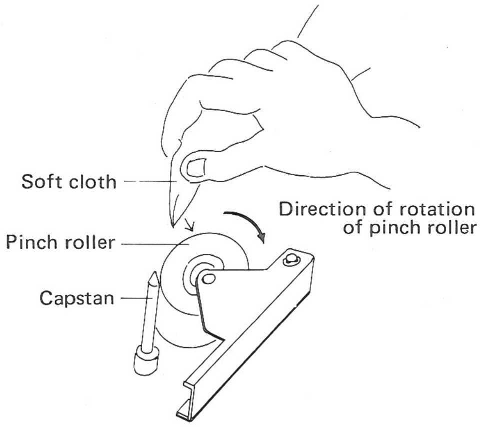

Soft cloth
Direction of rotation of pinch roller
Pinch roller
Capstan

Fig. 12

3. Cabinet

When the cabinet becomes dirty, wipe it with a soft cloth soaked with a neutral cleaning solution of a polishing cloth.
* Do not use thinner or benzine.

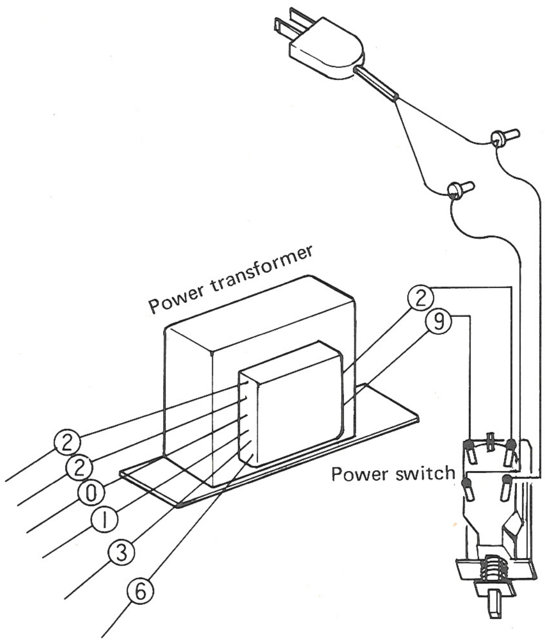
Demagnetizing

The heads are made from a material resistant to magnetization, but after long use they may become magnetized. A magnet brought into their vicinity can magnetize the heads, causing excess noise. If noise seems to have increased, demagnetize the heads with a head demagnetizer through the following procedure.

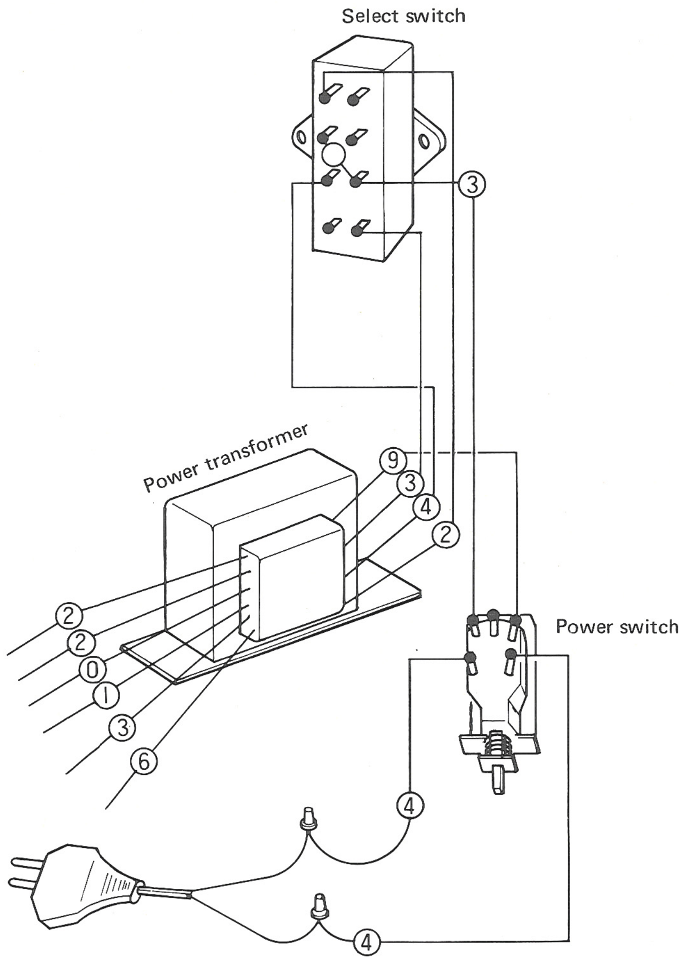
1. Turn the POWER switch OFF.
2. Wrap the tip of the demagnetizer with vinyl tape or soft cloth so as not to damage the head surface. Switch on the demagnetizer and bring it close to the head.
3. Move the tip of the demagnetizer slowly first to the left and right, then up and down in front of the head.
   Gradually move it away from the head and switch it off at a distance of more than 30cm. (12")
4. The erase head need not be demagnetized. The capstan shaft and tape guide should be demagnetized in the same way as the record/playback head.
   * Do not bring a magnetized metallic object (a screwdriver, for example) near the head as this will increase noise.

Wiring

CD-1920A/B


Power transformer
Power switch
②
⑨
②
②
⓪
①
③
⑥

CD-1920E


Select switch
③
Power transformer
⑨
③
④
②
②
②
⓪
①
③
⑥
Power switch
④
④

CD-1920U

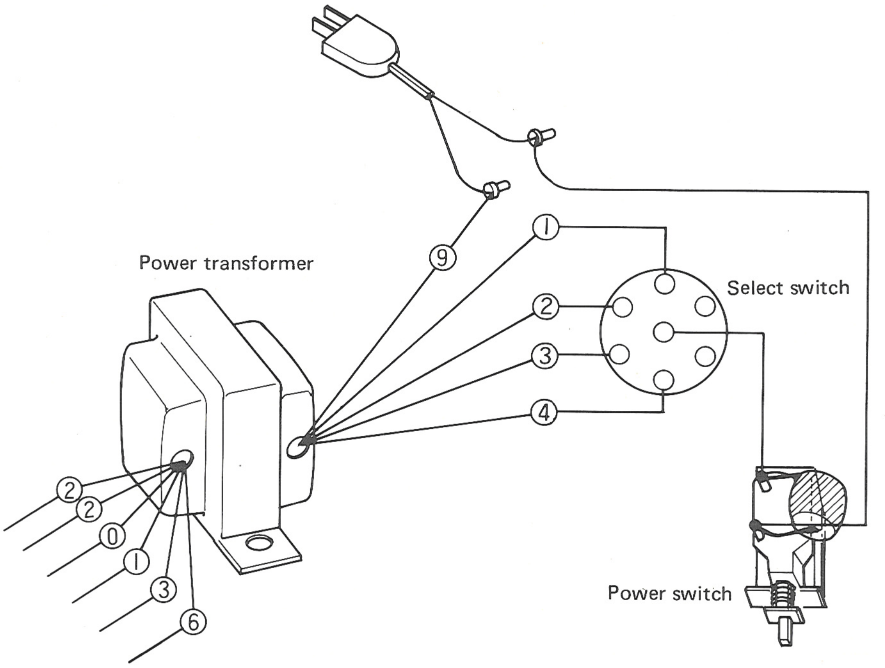

Power transformer
⑨
①
②
③
④
Select switch
②
②
⓪
①
③
⑥
Power switch

Fig. 13

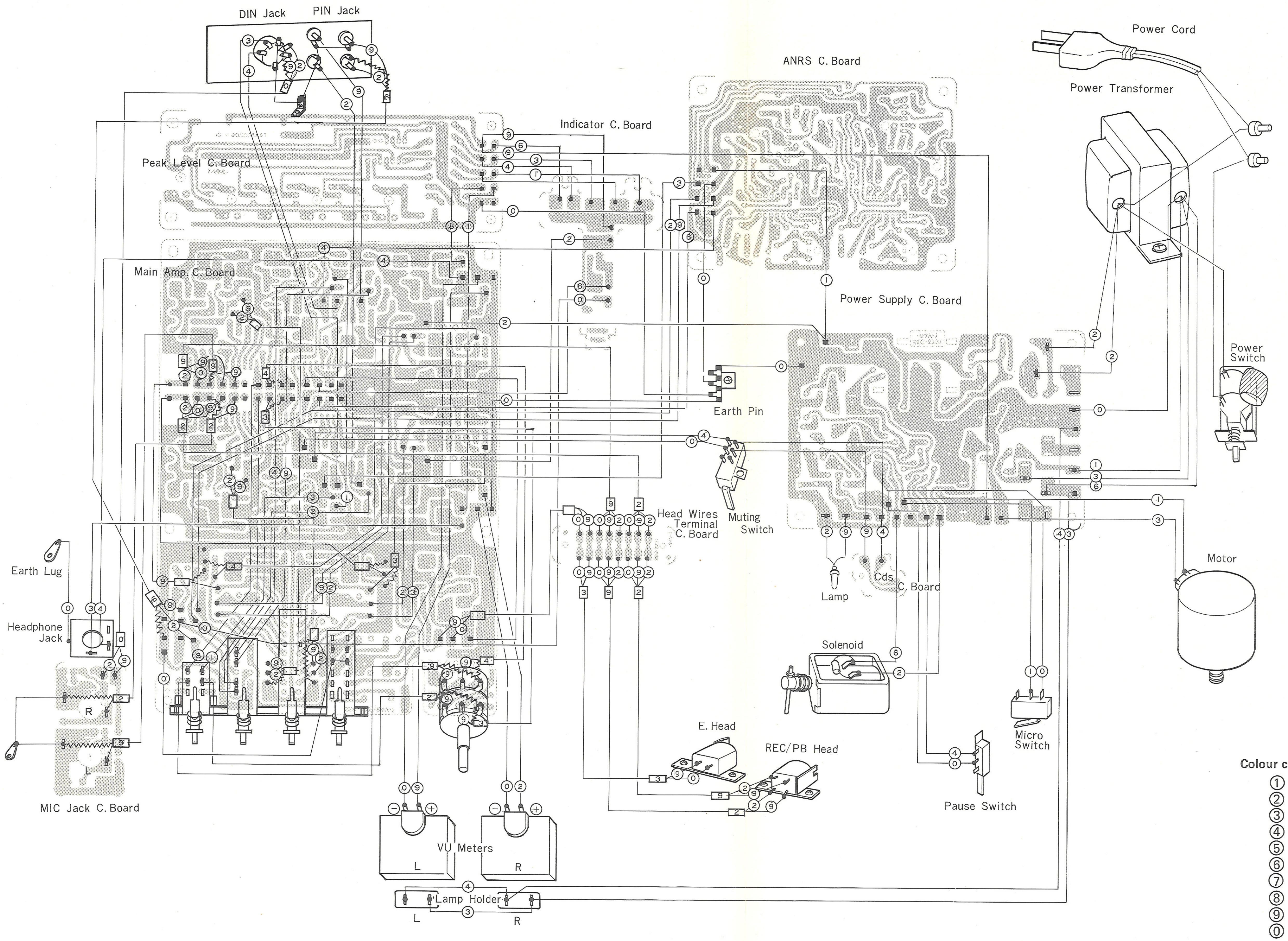
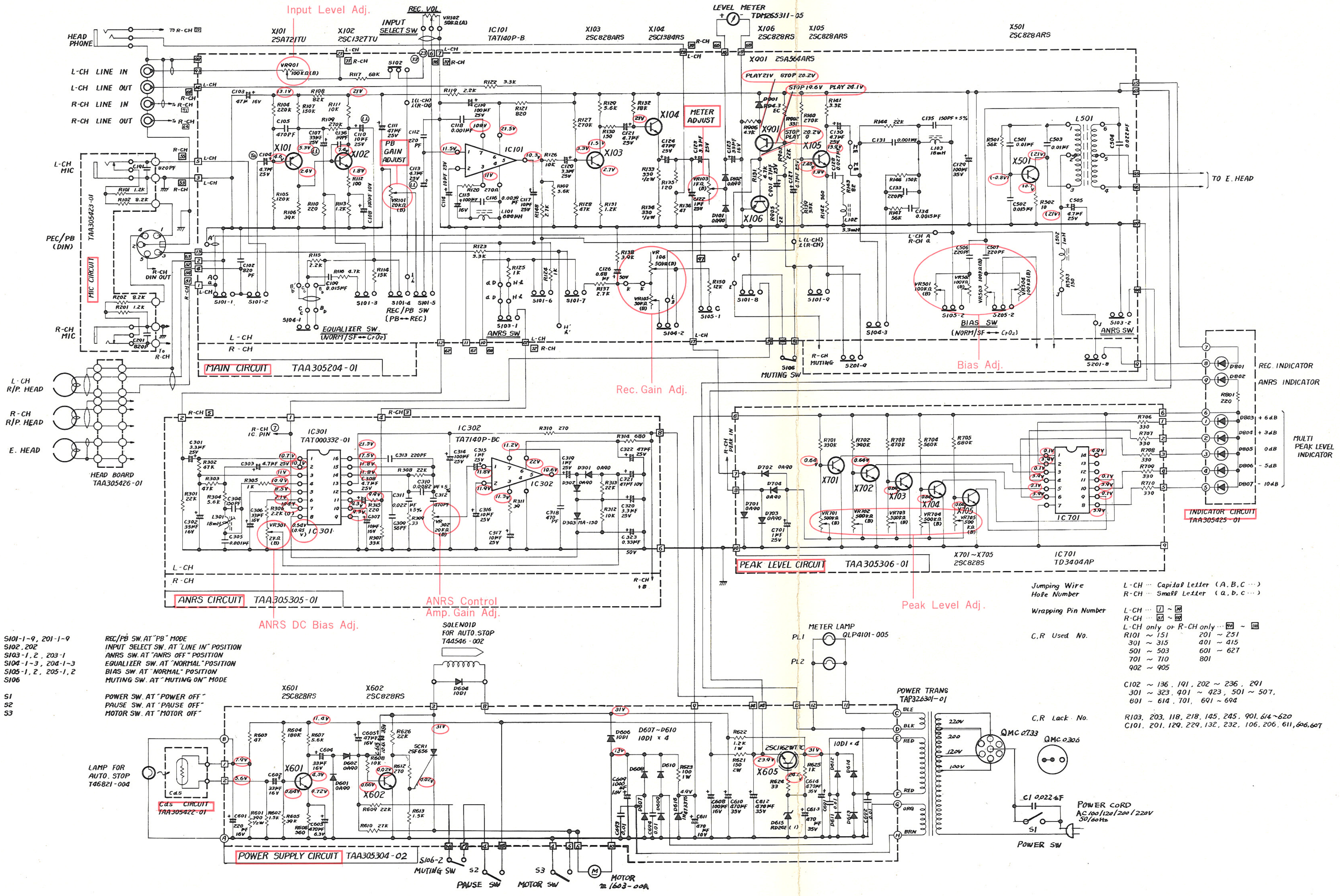

DIN Jack
PIN Jack
ANRS C. Board
Power Cord
Power Transformer
Indicator C. Board
Peak Level C. Board
Main Amp. C. Board
Power Supply C. Board
Power Switch
Earth Pin
Muting Switch
Head Wires Terminal C. Board
Lamp
Cds C. Board
Motor
Earth Lug
Headphone Jack
MIC Jack C. Board
R
L
Solenoid
E. Head
REC/PB Head
Micro Switch
Pause Switch
VU Meters
L
R
Lamp Holder
L
R

Fig. 14

Colour code are shown below

① .... Brown
② .... Red
③ .... Orange
④ .... Yellow
⑤ .... Green
⑥ .... Blue
⑦ .... Violet
⑧ .... Grey
⑨ .... White
⓪ .... Black

Standard Schematic Diagram


Input Level Adj.
REC. VOL
INPUT SELECT SW
LEVEL METER TDM265311-05
HEAD PHONE
L-CH LINE IN
L-CH LINE OUT
R-CH LINE IN
R-CH LINE OUT
L-CH MIC
PEC/PB (DIN)
R-CH MIC
MIC CIRCUIT TAA305423-01
X101 2SA721TU
X102 2SC1327TU
IC101 TA7140P-B
X103 2SC828ARS
X104 2SC1384RS
X106 2SC828RS
X105 2SC828ARS
X901 2SA564ARS
X501 2SC828ARS
PB GAIN ADJUST
METER ADJUST
PLAY 21V STOP 20.2V
STOP 19.6V PLAY 20.1V
TO E. HEAD
EQUALIZER SW. (NORM/SF↔CrO2)
REC/PB SW (PB↔REC)
ANRS SW
BIAS SW (NORM/SF↔CrO2)
MUTING SW
MAIN CIRCUIT TAA305204-01
Rec. Gain Adj.
Bias Adj.
L-CH R/P. HEAD
R-CH R/P. HEAD
E. HEAD
HEAD BOARD TAA305426-01
IC301 TAT000332-01
IC302 TA7140P-BC
ANRS CIRCUIT TAA305305-01
ANRS DC Bias Adj.
ANRS Control Amp. Gain Adj.
REC. INDICATOR
ANRS INDICATOR
MULTI PEAK LEVEL INDICATOR
+6dB
+3dB
0dB
-5dB
-10dB
INDICATOR CIRCUIT TAA305425-01
PEAK LEVEL CIRCUIT TAA305306-01
X701~X705 2SC828S
IC701 TD3404AP
Peak Level Adj.
METER LAMP PL1 PL2 QLP4101-005
SOLENOID FOR AUTO. STOP T44546-002
LAMP FOR AUTO. STOP T46821-004
CdS CIRCUIT TAA305422-01
X601 2SC828RS
X602 2SC828RS
X605 2SC1162WTC
POWER SUPPLY CIRCUIT TAA305304-02
S106-2 MUTING SW
S2 PAUSE SW
S3 MOTOR SW
MOTOR T21603-00A
POWER TRANS TAP32630I-01
QMC 0733
QMC 0306
C1 0.022μF
S1 POWER SW
POWER CORD AC 100/120/200/220V 50/60Hz

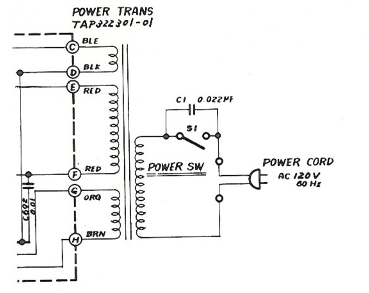
S101-1~9, 201-1~9 REC/PB SW. AT "PB" MODE
S102, 202 INPUT SELECT SW. AT "LINE IN" POSITION
S103-1, 2, 203-1 ANRS SW. AT "ANRS OFF" POSITION
S104-1~3, 204-1~3 EQUALIZER SW. AT "NORMAL" POSITION
S105-1, 2, 205-1, 2 BIAS SW. AT "NORMAL" POSITION
S106 MUTING SW. AT "MUTING ON" MODE

S1 POWER SW. AT "POWER OFF"
S2 PAUSE SW. AT "PAUSE OFF"
S3 MOTOR SW. AT "MOTOR OFF"

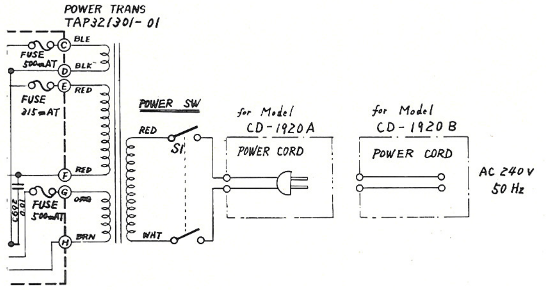
Jumping Wire Hole Number	L-CH ··· Capital Letter (A, B, C ···) R-CH ··· Small Letter (a, b, c ···)
Wrapping Pin Number	L-CH ··· 1 ~ 39 R-CH ··· 51 ~ 89 L-CH only or R-CH only ··· 90 ~ 100
C, R Used No.	R101 ~ 151, 201 ~ 251 301 ~ 315, 401 ~ 415 501 ~ 503, 601 ~ 627 701 ~ 710, 801 902 ~ 905 C102 ~ 136, 191, 202 ~ 236, 291 301 ~ 323, 401 ~ 423, 501 ~ 507, 601 ~ 614, 701, 691 ~ 694
C, R Lack No.	R103, 203, 118, 218, 145, 245, 901, 614~620 C101, 201, 129, 229, 132, 232, 106, 206, 611, 606, 607

Fig. 15

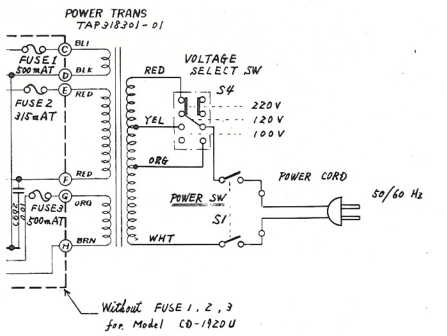
CD-1920/C


POWER TRANS TAP32230I-01
BLE
BLK
RED
ORG
BRN
C1 0.022μF
S1
POWER SW
POWER CORD AC 120V 60Hz

CD-1920A/B


POWER TRANS TAP32130I-01
FUSE 500mAT
FUSE 315mAT
FUSE 500mAT
POWER SW
S1
for Model CD-1920A
for Model CD-1920B
POWER CORD
POWER CORD
AC 240V 50Hz

CD-1920E


POWER TRANS TAP31830I-01
FUSE1 500mAT
FUSE2 315mAT
FUSE3 500mAT
VOLTAGE SELECT SW S4
220V
120V
100V
POWER SW S1
POWER CORD
50/60 Hz
Without FUSE 1, 2, 3 for Model CD-1920U

[Variable resistors]

VR101,201	Playback gain adj.
VR102,202	REC volume
VR103,203	VU meter gain adj.
VR104,204	REC gain adj. (chrome)
VR105,205	〃 (normal)
VR301,401	ANRS DC bias adj.
VR302,402	ANRS control amp gain adj.
VR501	Left bias adj. (normal)
VR502	〃 (chrome)
VR503	Right bias adj. (normal)
VR504	〃 (chrome)
VR701,702,703, 704,705	Peak level adj.
VR901	Input level adj. (Lch only)

[Switches]

S101-1~9, 201-1~9	REC/PB switch (at "Playback" mode)
S102,202	Input select switch (at "LINE IN" mode)
S103-12,203-1	ANRS switch (at "ANRS OFF" mode)
S104-1~3, 204-1~3	Equalizer switch (at "Normal" mode)
S105-1,2,205-1,2	Bias switch (at "Normal" mode)
S106,206	Muting switch (at "Muting on" mode)
S1	Power switch (at "OFF" mode)
S2	Pause switch (at "OFF" mode)
S3	Motor switch (at "OFF" mode)

[Transistors]

X101,201	2SA721TU	
X102,202	2SC1327TU	Main amp C. board
X103,203	2SC828ARS	
X105,205	2SC828ARS	
X106,206	2SC828RS	
X501	2SC828RAS	
X901	2SA564ARS	
X902	2SC828RAS	
X701~705	2SC828S	Peak level C. board
X601,602	2SC828RS	Power supply C. board
X603	2SA564ARS	
X604	2SC828RS	
X605	2SC1162WTBC	
SCR2 (X2)	2SF656	

[IC]

IC101,201	TA7140P-B	Main amp C. board
IC301	TAT000332-01	ANRS C. board
IC302	TA7140P-BC	
IC701	TD3404AP	Peak level C. board

[Diodes]

D101,102	OA90	Main amp C. board
D901	RD43EC	
D301,302	OA90	ANRS C. board
D303	MA-150	
D701,702,703, 704	OA90	Peak level C. board
D601,602	OA90	Power supply C. board
D603	MA-150	
D604,605,606, 607,608,609, 610,611,612, 613,614	10D1	
D615	RD24E	
D616	1N4733T	

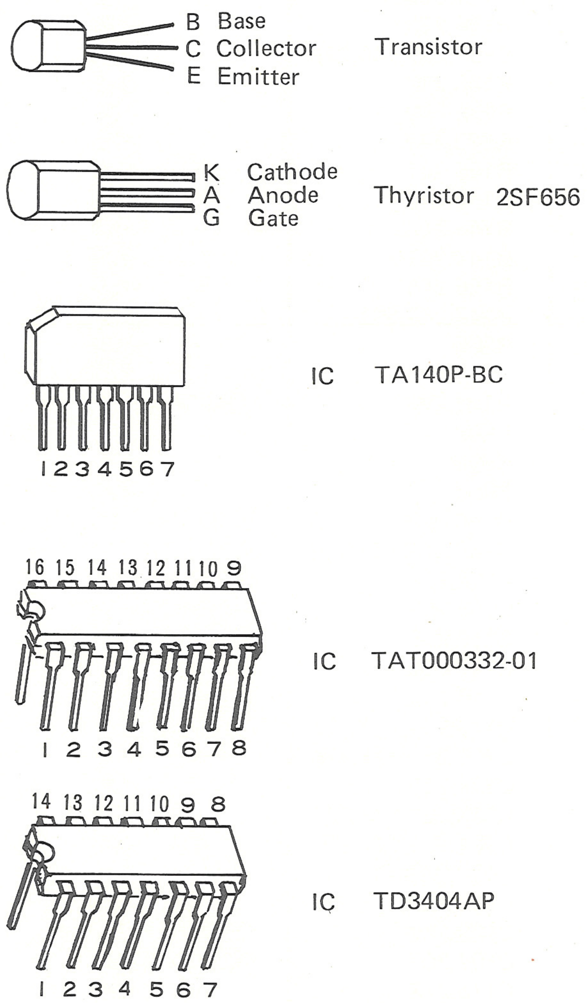

B Base
C Collector
E Emitter
Transistor
K Cathode
A Anode
G Gate
Thyristor 2SF656
1234567
IC TA140P-BC
16 15 14 13 12 11 10 9
1 2 3 4 5 6 7 8
IC TAT000332-01
14 13 12 11 10 9 8
1 2 3 4 5 6 7
IC TD3404AP

Fig. 18

Block Diagram

Recording system

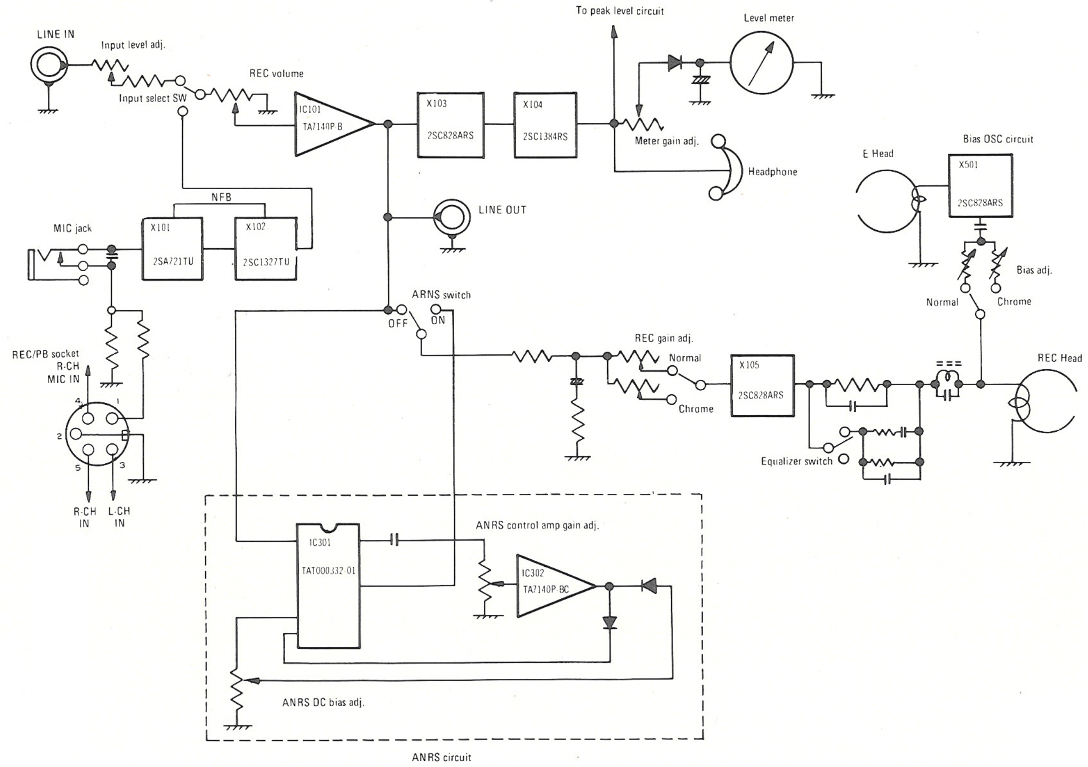

LINE IN
Input level adj.
Input select SW
REC volume
IC101
TA7140P-B
X103
2SC828ARS
X104
2SC1384RS
To peak level circuit
Level meter
Meter gain adj.
Headphone
NFB
MIC jack
X101
2SA721TU
X102
2SC1327TU
LINE OUT
ARNS switch
OFF
ON
REC/PB socket
R-CH
MIC IN
R-CH IN
L-CH IN
E Head
Bias OSC circuit
X501
2SC828ARS
Bias adj.
Normal
Chrome
REC gain adj.
Normal
Chrome
X105
2SC828ARS
REC Head
Equalizer switch
ANRS control amp gain adj.
IC301
TAT000332-01
IC302
TA7140P-BC
ANRS DC bias adj.
ANRS circuit

Fig. 16

Playback system

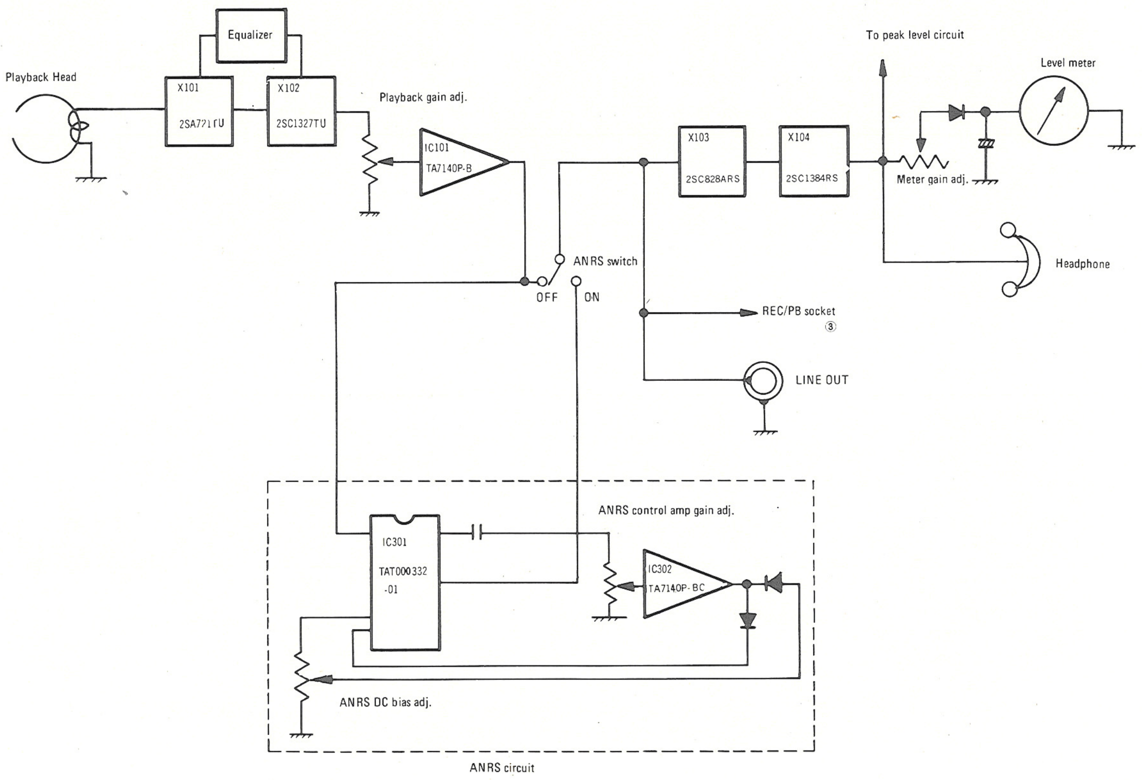
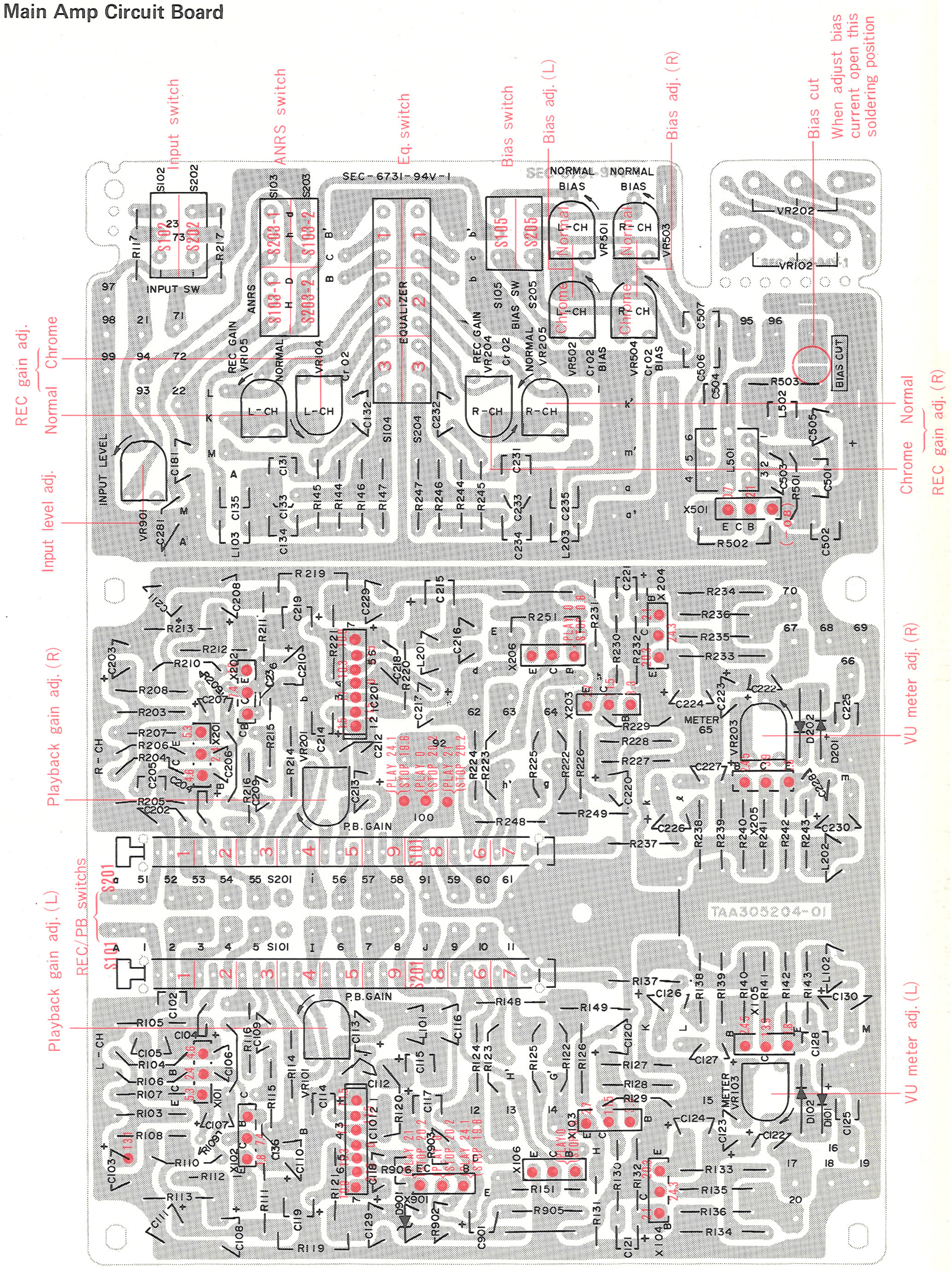

Equalizer
Playback Head
X101
2SA721TU
X102
2SC1327TU
Playback gain adj.
IC101
TA7140P-B
X103
2SC828ARS
X104
2SC1384RS
To peak level circuit
Level meter
Meter gain adj.
Headphone
ANRS switch
OFF
ON
REC/PB socket ③
LINE OUT
ANRS control amp gain adj.
IC301
TAT000332 -01
IC302
TA7140P-BC
ANRS DC bias adj.
ANRS circuit

Fig. 17

Circuit Board Parts

Main Amp Circuit Board



Input switch
ANRS switch
Eq. switch
Bias switch
Bias adj. (L)
Bias adj. (R)
Bias cut
When adjust bias current open this soldering position
REC gain adj. Chrome Normal
Input level adj.
Normal Chrome REC gain adj. (R)
Playback gain adj. (R)
VU meter adj. (R)
REC/PB switchs
Playback gain adj. (L)
VU meter adj. (L)
SEC-6731-94V-1
INPUT SW
INPUT LEVEL
EQUALIZER
ANRS
REC GAIN
BIAS SW
NORMAL BIAS
BIAS CUT
L-CH
R-CH
P.B. GAIN
METER
TAA305204-01

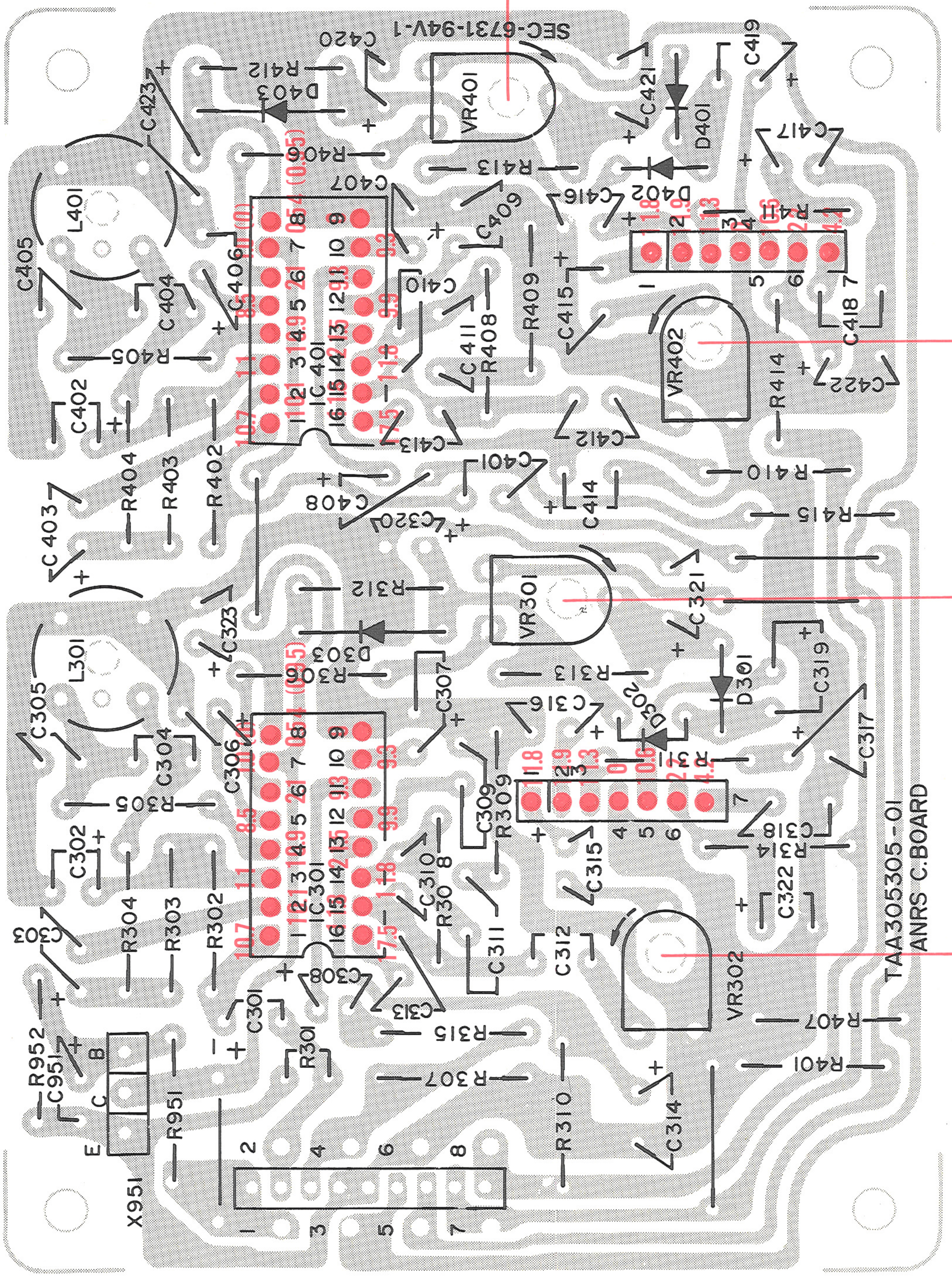
Fig. 19

Main Amp Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305204-01	Circuit Board	for main amp	1
R104,204	QRD141K-224	C. Resistor	220kΩ ¼W	2
R105,205	〃 -124	〃	120kΩ 〃	2
R106,206	〃 -393	〃	39kΩ 〃	2
R107,207	〃 -154	〃	150kΩ 〃	2
R108,208	〃 -823	〃	82kΩ 〃	2
R110,210	〃 -221	〃	220Ω 〃	2
R111,211,126,226	〃 -103	〃	10kΩ 〃	4
R112,212	〃 -101	〃	100Ω 〃	2
R113,213,131,231	〃 -122	〃	1.2kΩ 〃	4
R114,214	〃 -153	〃	15kΩ 〃	2
R115,215,119,219	〃 -222	〃	2.2kΩ 〃	4
R116,216,151,251	〃 -472	〃	4.7kΩ 〃	4
R117	〃 -683	〃	68kΩ 〃	1
R120,220	〃 -271	〃	270Ω 〃	2
R121,221	〃 -821	〃	820Ω 〃	2
R122,222,123,223	〃 -332	〃	3.3kΩ 〃	4
R124,224,125,225	〃 -102	〃	1kΩ 〃	4
R127,227	〃 -274	〃	270kΩ 〃	2
R128,228	〃 -473	〃	47kΩ 〃	2
R129,229,149,249	〃 -562	〃	5.6kΩ 〃	4
R130,230	〃 -151	〃	150Ω 〃	2
R132,232	〃 -183	〃	18kΩ 〃	2
R135,235	〃 -121	〃	120Ω 〃	2
R136,236	〃 -470	〃	47Ω 〃	2
R137,237,148,248	〃 -272	〃	2.7kΩ 〃	4
R138,238	〃 -392	〃	3.9kΩ 〃	2
R139,239	〃 -333	〃	33kΩ 〃	2
R140,240	〃 -274	〃	270kΩ 〃	2
R141,241	〃 -332	〃	3.3kΩ 〃	2
R142,242	〃 -561	〃	560Ω 〃	2
R143,243	〃 -820	〃	82Ω 〃	2
R144,244	〃 -223	〃	22kΩ 〃	2
R146,246	〃 -154	〃	150kΩ 〃	2
R147,247,501	〃 -563	〃	56kΩ 〃	3
R905	〃 -220	〃	22Ω	1
	〃 -0R0	Jump Wire	0Ω	5
R109,209	QRD143K-274	C. Resistor	270kΩ ¼W	2
R902	〃 -333	〃	33kΩ 〃	1
R903	〃 -223	〃	22kΩ 〃	1
R906	〃 -472	〃	4.7kΩ 〃	1
R150,250	QRD141K-153	〃	15kΩ 〃	2
R133,233,134,234	QRD121K-331	〃	330Ω ½W	4
C108,208	QEW41AA-107	E. Capacitor	100μF 10V	2
C103,203	QEW41CA-476	〃	47μF 16V	2
C115,215	〃 -107	〃	100μF 〃	2
C125,225	〃 -336	〃	33μF 〃	2
C110,210	QEB41EM-106	〃 (Low leak)	10μF 25V	2
C114,214,117,217	QEW41EA-106	〃	10μF 〃	4
C111,211,124,224	〃 -476	〃	47μF 〃	4
C119,219	〃 -107	〃	100μF 〃	2
C120,220,123,223	〃 -335	〃	3.3μF 〃	4
C121,221,127,227, 130,230,901	〃 -475	〃	4.7μF 〃	7
C122,222	〃 -105	〃	1μF 〃	2
C129,229	QEW41VA-107M	〃	100μF 35V	2
C107,207	QEB41EM-336	〃 (Low leak)	33μF 25V	2
C113,213	〃 -475	〃	4.7μF 〃	2

Ref. No.	Parts No.	Parts Name	Remarks		Q'ty
C126,226	QEB41HM-684M	E. Capacitor	0.68μF	50V	2
C104,204	QEE41EM-475	Tantal E. Capacitor	4.7μF	25V	2
C109,209	QFM41HK-153	Mylar Capacitor	0.015μF	50V	2
C118,218,131,231	〃 -102	〃	0.001μF	〃	4
C116,216	QFM41HJ-392	〃	0.0039μF	〃	2
C128,228	QFM41HK-273	〃	0.027μF	〃	2
C134,234	〃 -152	〃	0.0015μF	〃	2
C102,202	QCS11HK-821	Fixed Ceramic Capacitor	820pF		2
C105,205	〃 -471	〃	470pF		2
C136,236	〃 -390	〃	39pF		2
C112,212,133,233	〃 -221	〃	220pF		4
C135,235	〃 -151	〃	150pF		2
VR101,201	QVP8A0B-024	V. Resistor	20kΩ	(B)	2
VR103,203	〃 -013	〃	1kΩ	(B)	2
VR105,205, 104,204	〃 -054	〃	50kΩ	(B)	4
VR901	〃 -015	〃	100kΩ	(B)	1
L101,201	TAC000324-06	Inductor	680μF		2
L102,202	〃 -07	〃	3.3mH		2
L103,203	〃 -01	〃	18mH		2
D901	RD4.3EC	Zener Diode			1
S101-1~9,S201-1~9	QSS9201-001	Slide Switch			2
S102,202	QSP0249-101	Push Switch Ass'y			1
S103-1,2, 203-1					
S104-1,3, 204-1,3					
S105-1,2, 205-1,2					
X101,201	2SA721T,U	Si. Transistor			2
X102,202	2SC1327T,U	〃			2
X103,203,105,205	2SC828ARS	〃			4
X104,204	2SC1384RS	〃			2
D101,201,102,202	OA90	Ge. Diode			4
IC101,201	TA7140PB	Integrated Circuit			2
X901	2SA564ARS	Si. Transistor			1
X106,206	2SC828RS	〃			2
(OSC Circuit)					
L501	TAC294421-01	OSC Coil			1
X501	2SC828ARS	Si. Transistor			1
R502	QRD146K-100	C. Resistor	10Ω	¼W	1
R503	〃 -151	〃	150Ω	〃	1
C501,503	QFM42AK-103	Mylar Capacitor	0.01μF	100V	2
C502	〃 -153	〃	0.015μF	〃	1
C504	QFS42BK-222	Polystyrol Capacitor	0.0022μF		1
C506,507	QCS12HK-221	Fixed Ceramic Capacitor	220pF		2
C505	QEW41EA-475	E. Capacitor	4.7μF	25V	1
VR501,502,503, 504	QVP8A0B-015	V. Resistor	100kΩ	(B)	4
L502	TAC000324-03	Inductor	1mH		1
	E43727-002	Tab			47

ANRS Circuit Board


SEC-6731-94V-1
TAA305305-01
ANRS C.BOARD
IC401
IC301
VR401
VR402
VR301
VR302
L401
L301
D401
D402
D403
D301
D302
D303
X951
R952
C951
R951
E
C
B
R301
R302
R303
R304
R305
R306
R307
R308
R309
R310
R312
R313
R314
R315
R401
R402
R403
R404
R405
R406
R407
R408
R409
R410
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R415
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C302
C303
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C305
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C404
C405
C406
C407
C408
C409
C410
C411
C412
C413
C414
C415
C416
C417
C418
C419
C420
C421
C422
C423
10.7
1.1
8.5
14.9
10 (11)
14 (0.5)
9.3
9.9
11.8
7.5
11.8
2.9
1.3
0
0.6
2.2
4.2
1.8

ANRS DC bias adj. (R)

ANRS control amp. gain adj. (R)

DC bias adj. (L)

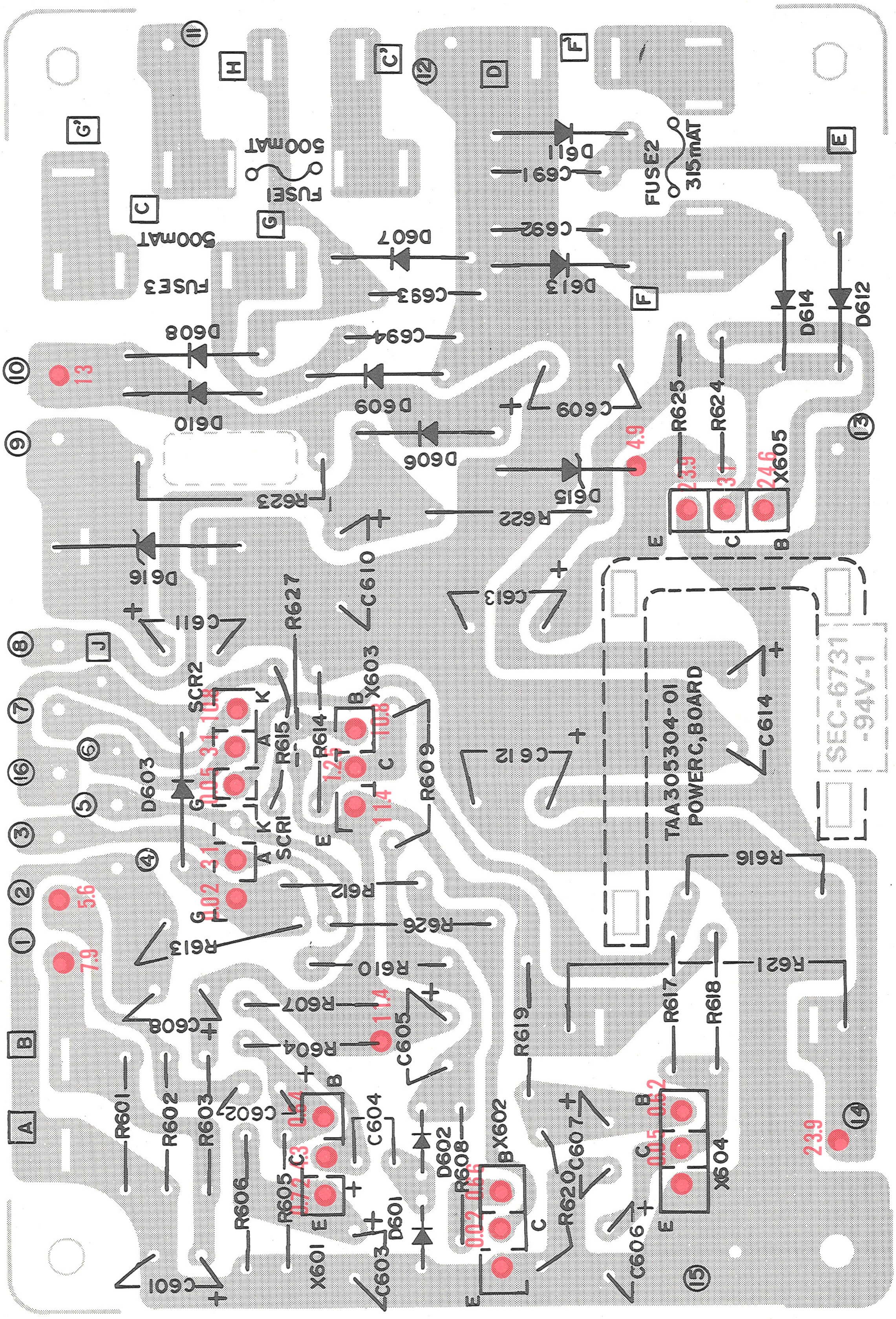
ANRS control amp. gain adj. (L)

Fig. 20

ANRS Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305305-01	Circuit Board	for ANRS	1
R401,308,408,313,413	QRD142K-223	C. Resistor	22kΩ ¼W	5
R302,402,303,403	〃 -473	〃	47kΩ 〃	4
R304,404	〃 -562	〃	5.6kΩ 〃	2
R305,405	〃 -102	〃	1kΩ 〃	2
R306,406	〃 -222	〃	2.2kΩ 〃	2
R307,407	〃 -333	〃	33kΩ 〃	2
R309,409	〃 -330	〃	33Ω 〃	2
R311,411	〃 -390	〃	39Ω 〃	2
R312,412	〃 -103	〃	10kΩ 〃	2
R315,415	〃 -221	〃	220Ω 〃	2
R310,410	QRD146K-271	〃	270Ω 〃	2
R314,414	〃 -681	〃	680Ω 〃	2
R301	QRD143K-223	〃	22kΩ 〃	1
C321,421	QEW41AA-476	E. Capacitor	47μF 10V	2
C302,402,306,406	QEW41CA-336	〃	33μF 16V	4
C307,407	〃 -106	〃	10μF 〃	2
C301,401	QEW41EA-335	〃	3.3μF 25V	2
C303,403,308,408	〃 -475	〃	4.7μF 〃	4
C314,414	〃 -107	〃	470μF 〃	2
C315,415,319,419	〃 -105	〃	1μF 〃	4
C316,416,317,417	〃 -106	〃	10μF 〃	4
C320,420	〃 -335	〃	3.3μF 〃	2
C322,422	〃 -476	〃	47μF 〃	2
C323,423	QEB41HM-334M	〃	0.33μF 50V	2
C305,405	QFM41HK-102	Mylar Capacitor	1000pF 〃	2
C310,410	QFM41HJ-822	〃	8200pF 〃	2
C311,411	〃 -223	〃	0.022μF 〃	2
C304,404	QCS11HK-151	Fixed Ceramic Capacitor	150pF	2
C309,409	〃 -560	〃	56pF	2
C312,412,318,418	〃 -471	〃	470pF	4
C313,413	〃 -221	〃	220pF	2
VR301,401	QVP8A0B-023	V. Resistor	2kΩ B curve	2
VR302,402	〃 -024	〃	20kΩ 〃	2
L301,401	TAC000320-01	V. Inductor	18mH	2
D301,302,401,402	OA90	Ge. Diode		4
D303,403	MA150	Si. Diode		2
IC301,401	TAT000332-01	Integrated Circuit		2
IC302,402	TA7140PBC	〃		2
	E43727-003	Tab		7

Power Supply Circuit Board



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500mAT
FUSE2
315mAT
FUSE3
500mAT
A
B
C
C'
D
E
F
F'
G
G'
H
J
①
②
③
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D601
D602
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C691
C692
C693
C694
R601
R602
R603
R604
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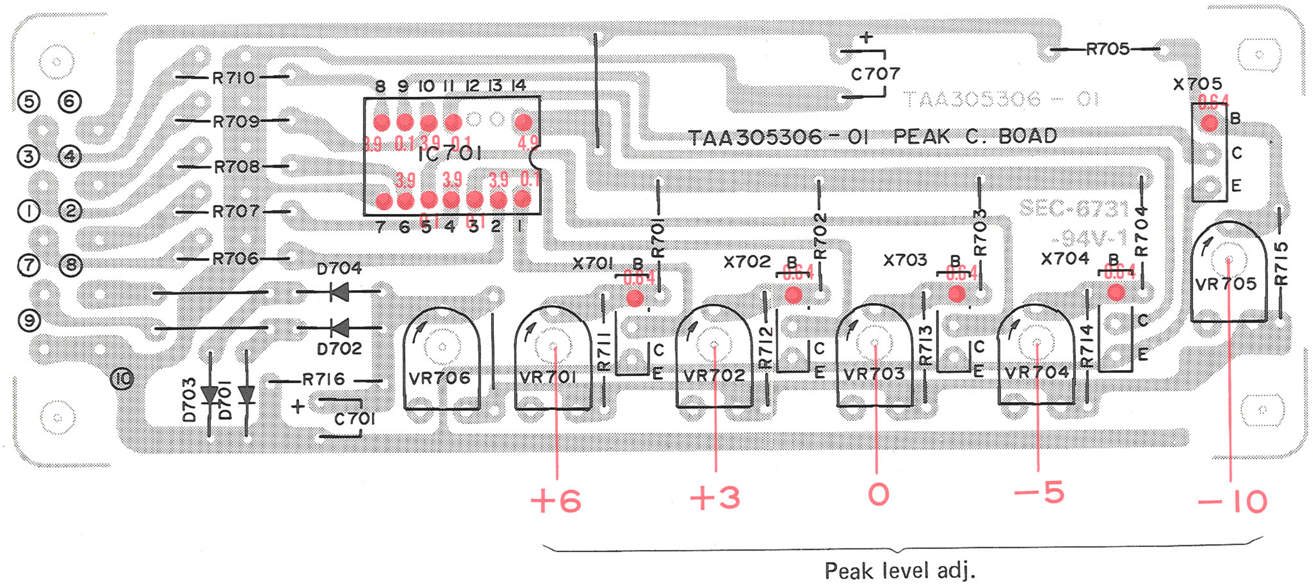
R612
R613
R614
R615
R616
R617
R618
R619
R620
R621
R622
R623
R624
R625
R626
R627
X601
X602
X603
X604
X605
SCR1
SCR2
E
B
C
G
A
K
TAA305304-01
POWER C,BOARD
SEC-6731
-94V-1
13
5.6
7.9
4.9
23.9
31
24.6
10.8
3.1
0.05
3.1
0.02
1.25
11.4
11.4
0.54
1.3
0.72
0.65
0.02
0.62
0.15
23.9

Fig. 21

Power Supply Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305304-01	Circuit Board	for Power Supply	1
R602,613	QRD142K-152	C. Resistor	1.5kΩ ¼W	2
R604	〃 -184	〃	180kΩ 〃	1
R605	〃 -393	〃	39kΩ 〃	1
R606	〃 -561	〃	560Ω 〃	1
R607	〃 -562	〃	5.6kΩ 〃	1
R608	〃 -103	〃	10kΩ 〃	1
R609	〃 -223	〃	22kΩ 〃	1
R610	〃 -273	〃	27kΩ 〃	1
R612	〃 -271	〃	270Ω 〃	1
R624	〃 -330	〃	33Ω 〃	1
R625	〃 -102	〃	1kΩ 〃	1
R626	〃 -223	〃	22kΩ 〃	1
R603	QRD146K-470	〃	47Ω 〃	1
R601	QRD121K-391	〃	390Ω ½W	1
R622	QRG016J-122	OMF Resistor	1.2kΩ 1W	1
R623	〃 -101	〃	100Ω 〃	1
R621	QRG026J-151	〃	150Ω 2W	1
C603	QEW40JA-477	E. Capacitor	470μF 6.3V	1
C611	QEW41AA-477	〃	470μF 10V	1
C601	QEW41CA-227	〃	220μF 16V	1
C602,604	〃 -336	〃	33μF 〃	2
C605	〃 -476	〃	47μF 〃	1
C608	〃 -107	〃	100μF 〃	1
C609	〃 -108	〃	1000μF 〃	1
C610,612,613,614	QEW41VA-477	〃	470μF 35V	4
C615	QEW41VA-106	E. Capacitor	10μF 35V	1
C691,692,693,694	QCF12HP-103	Fixed Ceramic Capacitor	0.01μF 500V	4
	A43596-001	Tab		4
	E43727-002	〃		15
	E40130-001	〃		8
X601,602	2SC828RS	Si. Transistor		2
X605	2SC1162WTBC	〃		1
SCR1	2SF656	SCR		1
D615	RD24E(1)	Zener Diode		1
D616	1N4733T5	〃		1
D601,602	OA90	Ge. Diode		2
D606,607,608,609, 610,611,612,613, 614	T30155-001	Si. Diode		9
	TAR272448-01	Heat Sink		1
	LPSP3008ZS	Screw	for X605	1
	TAZ000331-02	Fuse Holder	(CD-1920A/B/E)	6
F1	QMF51A2-R50	Fuse	500mA (CD-1920A/B/E)	1
F2	〃 -R315	〃	315mA (〃)	1
F3	〃 -R50	〃	500mA (〃)	1

Peak Level Circuit Board



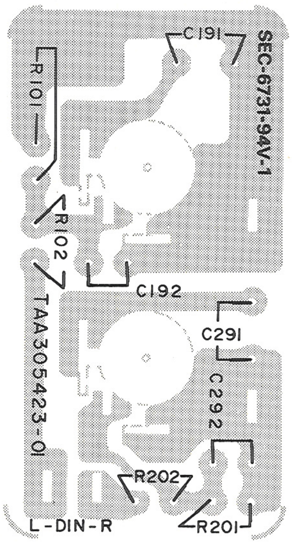
R710
R709
R708
R707
R706
⑤ ⑥
③ ④
① ②
⑦ ⑧
⑨
⑩
8 9 10 11 12 13 14
IC701
7 6 5 4 3 2 1
3.9
0.1
3.9
0.1
4.9
3.9
3.9
3.9
0.1
3.1
D704
D702
D703
D701
R716
C701
C707
R705
X705
TAA305306 - 01
TAA305306 - 01 PEAK C. BOAD
SEC-6731
-94V-1
X701
X702
X703
X704
B
C
E
0.64
R701
R702
R703
R704
R711
R712
R713
R714
R715
VR706
VR701
VR702
VR703
VR704
VR705
+6
+3
0
−5
−10
Peak level adj.

Fig. 22

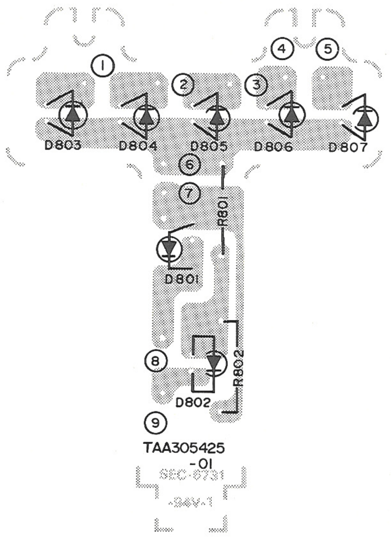
Peak Level Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305306-01	Circuit Board	for peak	1
R701	QRD142K-334	C. Resistor	330kΩ ¼W	1
R702	〃 -394	〃	390kΩ 〃	1
R703	〃 -474	〃	470kΩ 〃	1
R704	〃 -564	〃	560kΩ 〃	1
R705	〃 -684	〃	680kΩ 〃	1
R706,707,708,709, 710	〃 -331	〃	330Ω 〃	5
C701	QEW41EA-105	E. Capacitor	1μF 25V	1
R701,702,703,704, 705	QVP8A0B-055	V. Resistor	500kΩ (B)	5
D701,702,703,704	OA90	Ge. Diode		4
X701,702,703,704, 705	2SC828S	Si. Transistor		5
IC701	TD3404AP	Integrated Circuit		1
	E43727-002	Tab		10

MIC Jack Circuit Board


C191
SEC-6731-94V-1
R101
R102
C192
TAA305423-01
C291
C292
R202
L-DIN-R
R201

Indicator Circuit Board


①
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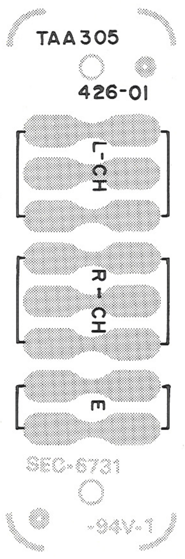
⑤
D803
D804
D805
D806
D807
⑥
⑦
R801
D801
⑧
R802
D802
⑨
TAA305425
-01
SEC-6731
-94V-1

Head Terminal Circuit Board


TAA305
426-01
L-CH
R-CH
E
SEC-6731
-94V-1

Cds Circuit Board

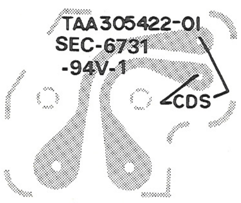

TAA305422-01
SEC-6731
-94V-1
CDS

Fig. 23

Other Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
(MIC Jack C. Board)				
	TAA305423-01	Circuit Board	for MIC jack	1
R101,201	QRD143K-122	C. Resistor	1.2kΩ ¼W	2
R102,202	〃 -822	〃	8.2kΩ 〃	2
C191,291	QCS11HK-821	Fixed Ceramic Capacitor	820pF	2
	E40516-001	Tab		4
	TAJ305307-02	Jack Ass'y	for MIC & headphone	1set
(Indicator C. Board)				
	TAA305425-01	Circuit Board	for indicator	1
D801,803,804,805, 806,807	TLR102	LED		6
D802	TRG102	〃		1
	TER305427-01	Spacer		7
R801	QRD142K-221	C. Resistor	220Ω ¼W	1
(Other C. Board)				
	TAA305426-01	Circuit Board	for headwire terminal	1
	TAA305422-01	Circuit Board	for Cds	1
	T45616-001	Cds Photo-sell		1

Mechanical Component List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	TGB305205-0A	Chassis Base Ass'y		1set
2	TFB265488-01	Brake Arm		1
3	TER265487-01	Brake Rubber		2
4	TFH265486-01	Collar	for Brake Arm	1
5	T47449-00B	Rew Bar Ass'y		1set
6	T47453-00C	Rec Bar Ass'y		1set
7	T30302-049	Collar	for Rec Bar	1
8	TFH265516-01	Stud	for Brake Lever	1
9	TGB265485-0B	Play Bar Ass'y		1set
10	TFH265514-01	Pin (Play Bar)	Play Bar & Slide Base	1
11	T47459-00B	FF Bar Ass'y		1set
12	TFB305417-01	Spacer		1
13	TGH265546-0B	Capstan Metal Ass'y		1set
14	TGB291420-0A	Stop Bar Ass'y		1set
15	TGB265482-0B	Slide Base Ass'y		1set
16	TFP014497-01	Spring Plate		1
17	TFW014498-01	Spring	for Play Bar	1
18	TJN265559-01	Silencer	for Spring	1
19	T31063-001	R.P. Head Ass'y		1
20	T30302-066	R.P. Head Collar		1
21	TFP294513-01	R.P. Head Spring	for R.P. Head	1
22	THS265480-0A	E. Head Ass'y		1
23	T45640-001	Wire Holder	for Head Wire Clamp	2
24	T30302-067	E. Head Collar		1
25	TGB291415-0A	Pinch Roller Arm Ass'y		1set
26	TFW294483-01	Pinch Roller Spring		1
27	TGP294462-0B	Take Up Disk Ass'y		1set
28	TGP294464-0D	Supply Disk Ass'y		1set
29	TGB265475-0A	Push Button Cam Ass'y		1set
30	TFB265509-02	Stopper	for Push Button Cam	1
31	QSM1S01-015	Micro SW Ass'y		1
32	T47528-002	SW Lever		1
33	TGX294488-0A	FF Arm Ass'y		1
34	T47507-001	FF Spring		1
35	TFH265557-01	Metal	for FF Arm	1
36	T47508-00A	Rew Arm Ass'y		1
37	T47500-00A	Idler Ass'y		1
38	TFH265534-01	Metal	for Rew Arm	1
39	TFB294478-02	Review Lever		1
40	T47529-001	Metal	for Review Lever	1
41	TGB265472-0A	Brake Lever Ass'y		1set
42	TGP265471-0C	Take Up Lever Ass'y		1set
43	T47520-001	Lever Spring		1
44	TGP265571-0A	Idler Pulley Ass'y		1set
45	TFB291414-01	Rec Safety Lever		1
46	TFB265535-01	Select Lever	for Stop Eject	1
47	TFW305443-01	Select Lever Spring		1
48	TGB305404-0A	Motor Bracket Ass'y		1set
49	m1603-00A	Motor Ass'y		1set
50	53492	Rubber Bushing		3
51	T30302-058	Collar	for Motor	3
52	TGD305446-0A	Flywheel Ass'y		1set
53	TEB265499-02	Capstan Belt		1
54	TFB265492-01	Flywheel Holder		1
55	TEP265498-01	Thrust Washer		1
56	TEB265497-01	Take Up Belt		1
57	TGW305303-0A	Counter Ass'y		1set
58	TFB265495-02	Plate		1
59	TFB305406-01	Counter Bracket		1
60	TFB305407-01	Counter Belt		1
61	TGB305409-0B	Pause Bar Ass'y		1set
62	QSP1210-011	Push SW Ass'y	for Pause	1
63	TFB305408-01	Pause SW Bracket		1
64	TFB305411-01	Bracket	for Pause Bar	1

— Continued on page 25 —

Mechanical Components (1)

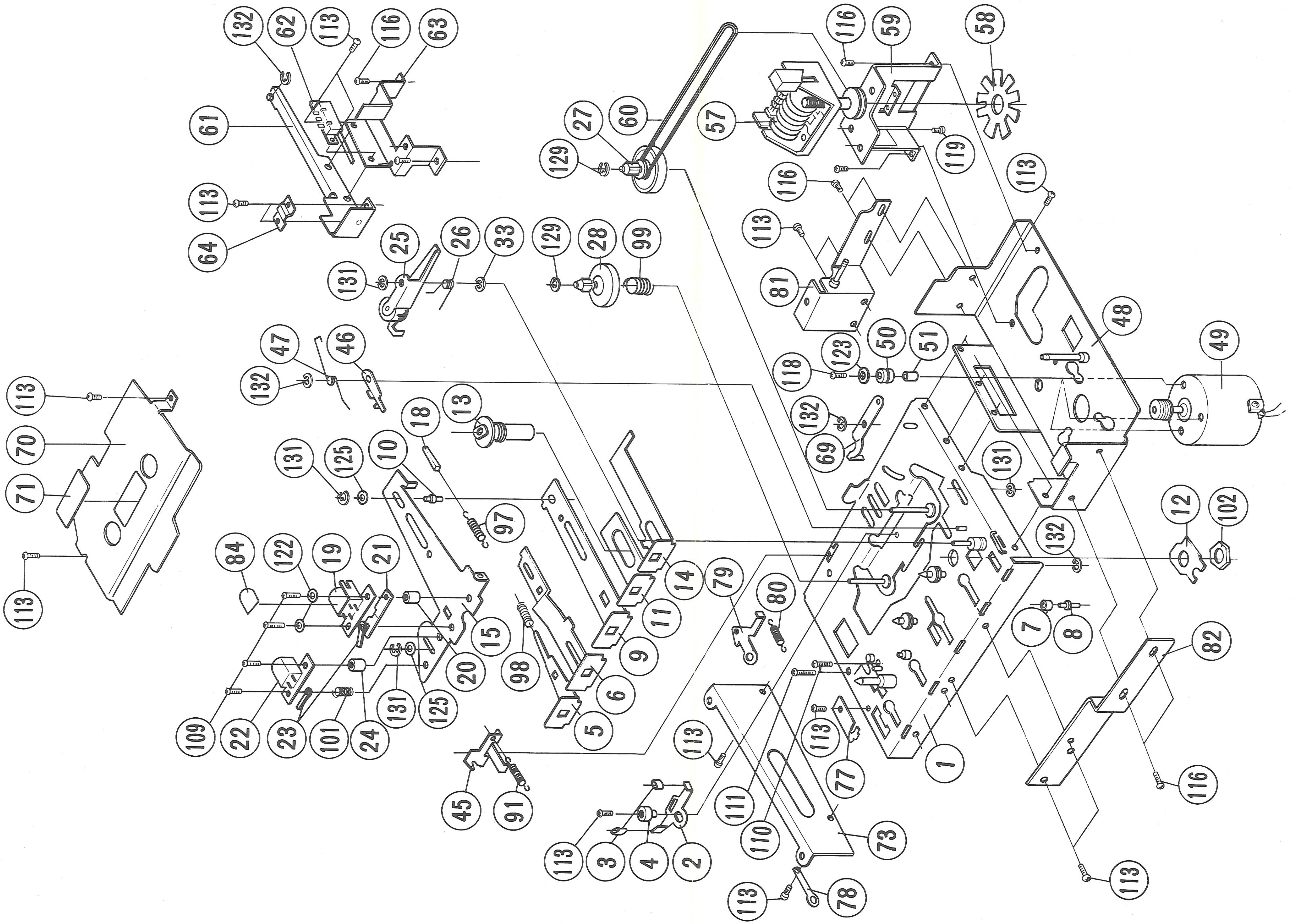

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Fig. 24

Mechanical Components (2)

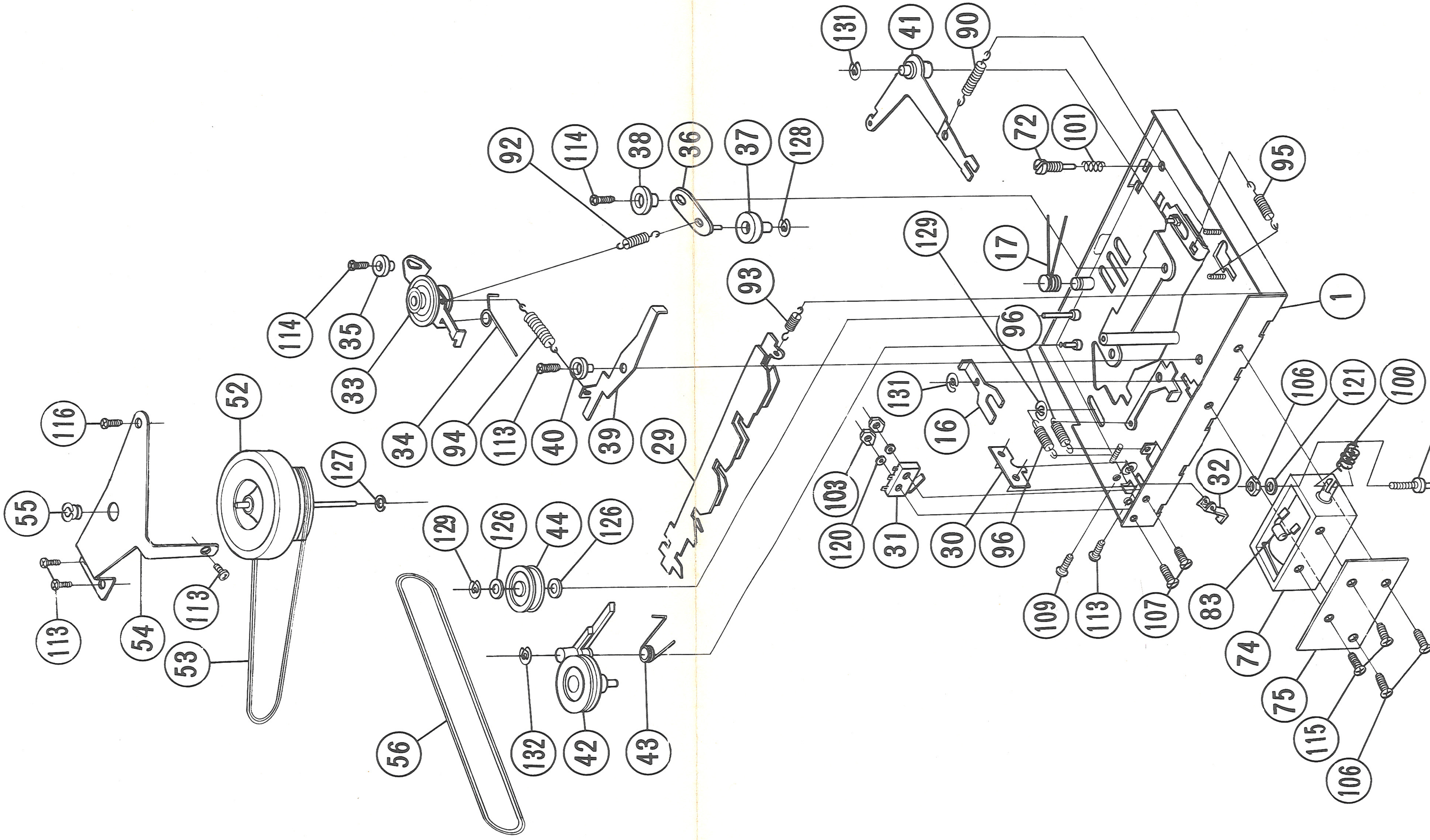
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Fig. 25

— Continued from page 22 —

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
70	TFB291411-01	Cassette Holder		1
71	TJP305451-01	Reflection Plate		1
72	TFH305442-01	Special Screw		1
73	TGB305432-0A	Holder Bracket Ass'y	(Left)	1
74	T44546-002	DC Solenoid		1
75	TFB265458-02	Solenoid Bracket		1
76	TFH265457-01	Solenoid Pin		1
77	TFB265456-01	Guide Plate		1
79	TFB265550-02	Rec Lock Lever		1
81	TGB305430-0A	Holder Bracket Ass'y		1
82	TFB305429-01	Bracket		1
83	T30155-001 or V06-B	Si. Diode	for Solenoid	2
84	TJL000430-01	Head Plate		1
90	T30300-140	Spring	for Brake Lever Ass'y	1
91	〃 -121	〃	for Rock Lever	1
92	〃 -126	〃	for Idler	1
93	〃 -132	〃	for Button Cam	1
94	〃 -135	〃	for Idler	1
95	〃 -136	〃	for Rec Bar	1
96	〃 -137	〃	for FF Bar, Stop Bar	2
97	〃 -139	〃	for Play Bar & Slide Base	1
98	T30301-119	〃	for Rew Bar	1
99	〃 -103	〃	Back Tension	1
100	〃 -106	〃		1
101	〃 -115	〃	for E. Head, Special Screw	2
102	T47828-001	Nut	M8 x 0.75	1
103	NNS2000N	〃	for Micro Switch	2
105	NTB3000S	〃	for Solenoid	1
106	SSSP2604Z	Screw	for Bracket	2
107	SSSP2012Z	〃	for Micro Switch	2
109	SPSP2008Z	〃	for R.P. Head, E. Head, Stopper	5
110	SPSP2010Z	〃	for Rec Spring	1
111	SPSP2012Z	〃	for Spring	1
113	LPSP2005Z	〃	for Brake Arm, Cassette Holder Stopper, Rew Arm, Review Lever, Motor Bracket, Pause Bar, Holder Bracket	19
114	LPSP2006Z	〃	FF Arm, Holder	4
115	LPSP2604Z	〃	Solenoid, Guide Plate	3
116	LPSP2605Z	〃	for Counter Bracket SW Bracket, Motor Bracket	8
118	LSP2608Z	〃	for Motor	3
119	LPSP3005ZS	〃	for Counter	2
120	WLS2000	Washer	for Micro Switch	2
121	WLS3000	〃	for Solenoid	1
122	WNS2000N	〃	for R.P. Head	2
123	Q03091-154	〃	for Motor	3
125	Q03093-430	〃	for Slide Base	2
126	〃 -610	〃	for Idler Pully	2
127	〃 -611	〃	for Flywheel	2
128	REE1000	E Ring	for Idler	1
129	REE1200	〃	for Disc Ass'y, SW Lever, Idler Pully	4
131	REE2000	〃	for Play Bar, Slide Base, Pinch Roller, Brake Lever	7
132	REE2500	〃	for Pause Bar & Pause Lever Stop Bar, Take Up Lever Stop Eject	6
133	REE4000	〃		1

Enclosure Ass'y and Electrical Parts List except Circuit Board Parts

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	TFB305447-01	Push Button Bracket		1
2	TFB305428-01	Push Button Spacer		4
3	TJB305311-0A	Push Button Ass'y		4
4	〃 -0B	〃	for REC	1
5	〃 -0C	〃	for STOP/EJECT	1
6	TFH291457-01	Push Button Shaft		1
7	TGB291485-0A	Bracket Ass'y		1
8	TFB265436-01	Switch Bracket	for Muting Switch	1
9	T46821-002	Pilot Lamp		1
10	53492	Rubber Bushing		1
11	TGB291423-0A	Cassette Holder Ass'y		1set
12	TGB291322-0B	Cassette Door Holder Ass'y		1set
13	TFS3006ZS	Set Screw	for Cassette Holder	1
14	TFH305445-01	Shaft		1
15	TFW305435-01	Spring		1
16	TJN265423-05	Panel Cushion		2
17	TER291412-01	Rubber Cushion		2
18	TFW305458-01	Spring		1
19	TGB291434-0B	Lock Arm Ass'y		1set
20	TFB305454-01	REC Arm (3)		1
21	TGB305416-0B	REC Bracket Ass'y		1set
22	TFB305453-01	REC Arm (2)		1
23	T44341-001	Rubber Tire		1
24	TFB305414-01	REC Arm (1)		1
25	TFW305419-01	Rod		1
26	T47946-001	REC Rod		1
27	TEP267495-0B	Brake Pipe Ass'y		1set
28	TEP267490-03	Brake Shaft		1
29	TER267508-02	O Ring		1
30	TGB305457-0A	Brake Arm Ass'y		1set
31	TFB305439-01	Spring Bracket		1
32	TFB305103-01	Rear Bracket	CD-1920/A/B/C/U	1
	〃 -02	〃	CD-1920E/U	1
33	QMP1200-183	Power Cord with Plug	CD-1920/C	1
	QMP2500-183	〃	CD-1920A, SAA2-core	1
	QMP9017-004	〃	CD-1920B BS2-core	1
	QMP3900-183	〃	CD-1920E	1
	QMP7600-183	〃	CD-1920U	1
34	QHS3876-162	Cord Stopper		1
35	E48729-001	Plastic Rivet	for Jack Ass'y	6
36	FG9060-001	Connector	for Power Cord	2
37	TJE305201-01	Meter Escutcheon		1
38	TDM265311-06	Level Meter		2
39	E49447-003	Shaft	for Escutcheon	2
40	TJP305104-03	Front Panel		1
41	TJB291306-0C	Push SW Button Ass'y		4
42	TJB305202-0B	〃	for Power SW	1
43	RDS12000Z	C.S. Ring		5
44	TJC318101-01	Bottom Cover		1
45	TJC305105-01	Steel Cover		1
46	E60134-001	Special Screw		4
47	TJK305401-0A	Volume Knob (A) Ass'y		1
48	TJK305402-01	〃 (B) 〃		1
49	TJP291327-0A	Cassette Door Ass'y		1set
50	TJP305309-01	Cassette Door Plate		1
51	TJL000313-90	Name Plate	CD-1920	1
	〃 -91	〃	CD-1920A	1
	〃 -92	〃	CD-1920B	1
	TJL000342-01	〃	CD-1920C	1

– Continued on page 29 –

Enclosure Assembly and Electrical Parts Except Circuit Board Parts

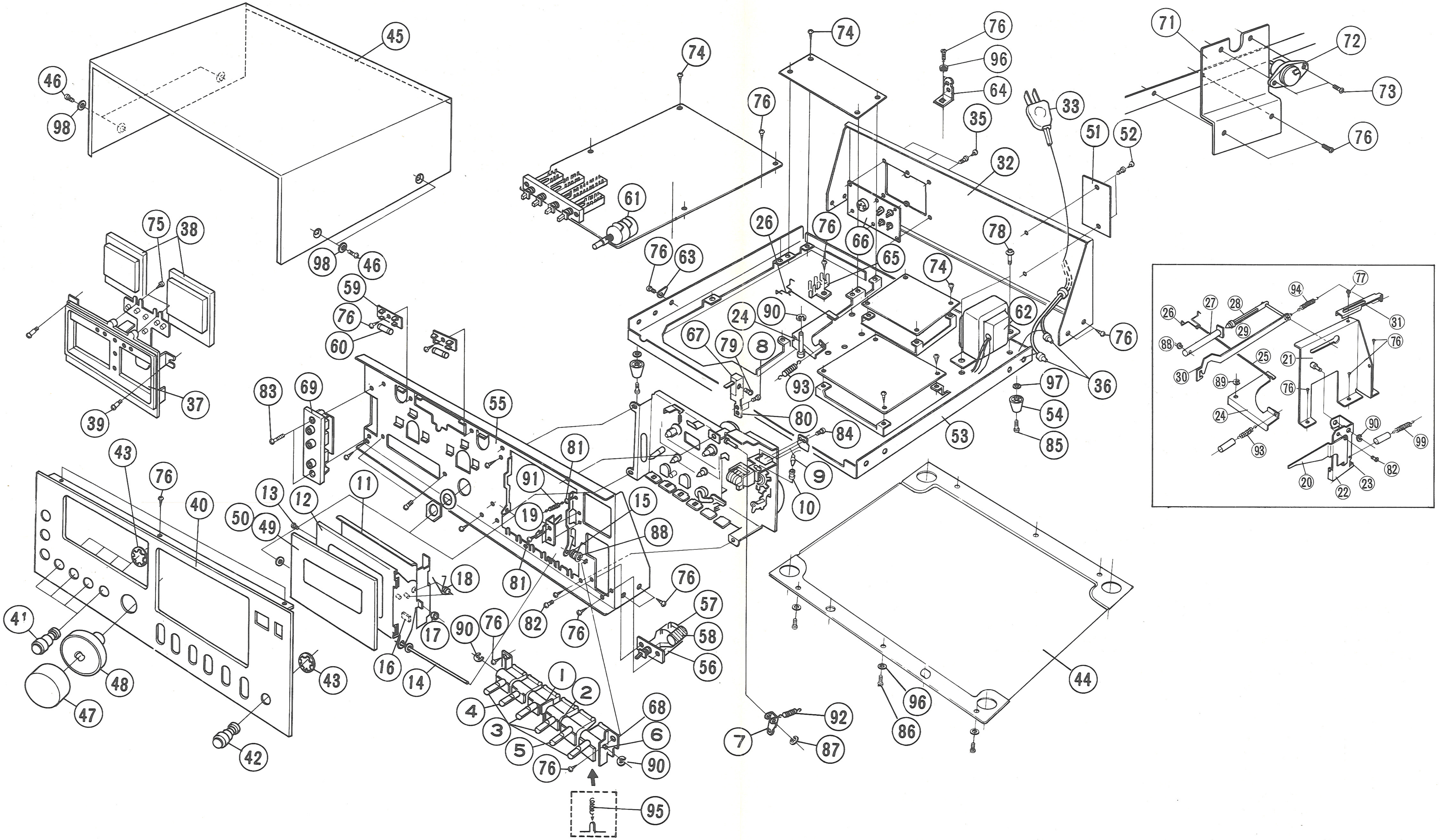
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Fig. 26

Packing

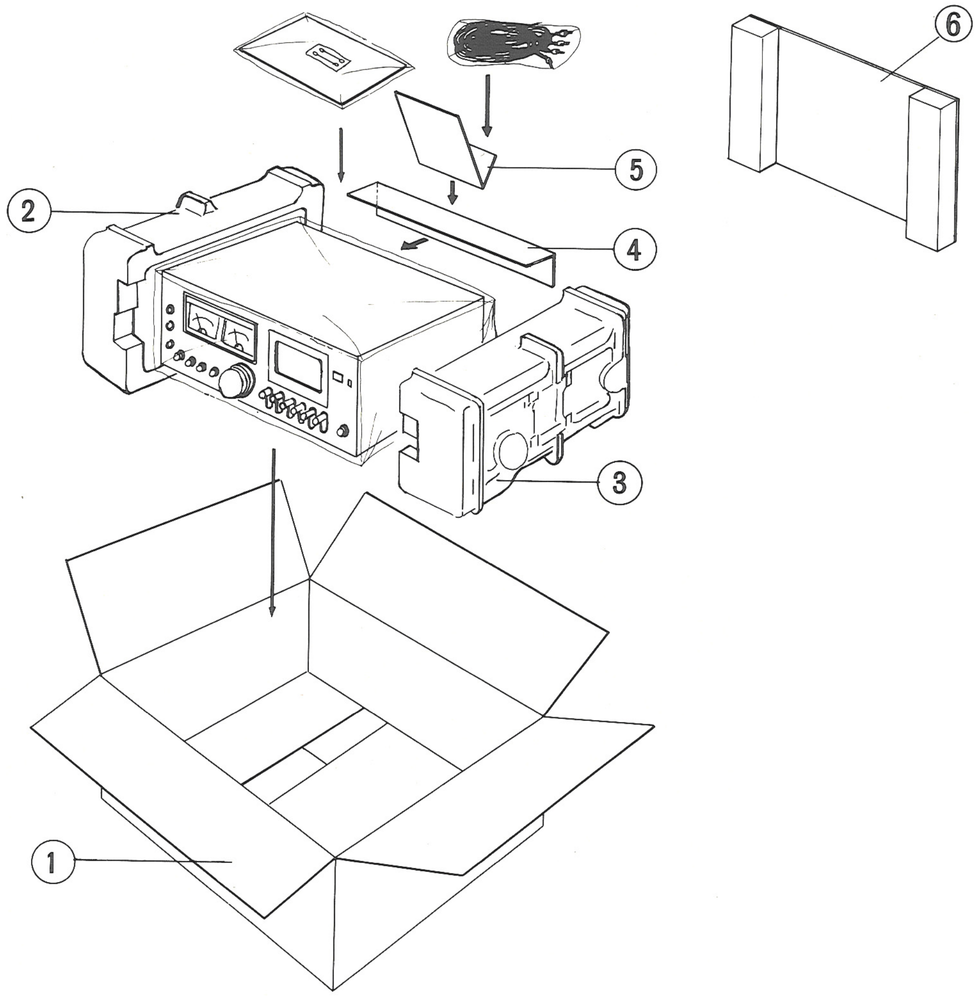

Fig. 24

Packing List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1~3	TKB305449-0B	Packing Case Ass'y	CD-1920B/E/U	1set
	〃 -0C	〃	CD-1920A	1set
1	〃 -06	Case	CD-1920B/E/U	1
	〃 -07	〃	CD-1920A	1
2	TKC305108-01	Cushion	Right	1
3	TKC305107-01	〃	Left	1
4	TKB305449-01	Plate		1
5	〃 -05	〃		1
6	〃 -08	Cushion	CD-1920A	1
	AP4056A-036	Envelope	for Pin Cord	1
	QPGA055-06005	〃	for Set	1
	AP4056A-077	〃	for Instruction Book	1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
CN-201	Din Cord Ass'y	CD-1920A/B/E	1
T30046-00B	PIN Cord Ass'y	CD-1920/C/U	2
T47796-00B	Head Cleaning Stick		2
AP4056A-024	Envelope	for H.C. Stick	1
TLT000429-01	Caution Card	〃	1
TLT305452-02	〃	〃	1
TLT000448-01	Caution Label	CD-1920/C, UL Caution	1
TLT052401-01	Warning Label	CD-1920A/B/E	1
TLT279401-01	Caution Label	CD-1920A/E	1
BT20006C	Warranty Card	CD-1920	1
T46965-002	Demo Cassette		1
TLJ000476-02	ANRS Seal Ass'y		1
T7415EGF	Instruction Book		1
TLT000443-01	Seal	CD-1920B (for Front Panel)	1
QZL1002-003	Warning Label	CD-1920B (for Power Cord)	1
TLT000462-02	B.S. Caution	CD-1920B (for Inst Book)	1
T46328-001	Caution Label	CD-1920U	1
〃 -004	〃	CD-1920E	1

Fig. 27

— Continued from page 26 —

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TJL000313-93	Name Plate	CD-1920E	1
	〃 -94	〃	CD-1920U	1
52	E48729-002	Plastic Rivet		2
53	TGC305203-0A	Amp Chassis Ass'y		1set
54	E47227-005	Foot		4
55	TFB305101-02	Foot Bracket		1
56	QSP1110-222	Push Switch	S1 for Power, CD-1920/C	1
	QSP2111-011	〃	〃 CD-1920A/B/E	1
	QSP1110-221	〃	〃 CD-1920U	1
57	QFH43AM-223	M.M. Capacitor	C1, CD-1920/C	1
58	T47047-001	Condenser Cap	CD-1920/C	1
59	QMG1121-003	Lamp Holder		2
60	QLP4101-005	Pilot Lamp	PL1,2	2
61	QVZ2206-001	V. Resistor	VR102,202 50kΩ A	1set
62	TAP322301-01	Power Transformer	CD-1920/C	1
	TAP321301-01	〃	CD-1920A/B	1
	TAP319301-01	〃	CD-1920E/U	1
	TAP326301-01	〃	CD-1920U	1
63	51739-002	Lug		1
64	TAW272462-01	〃		1
65	E46651-001	Lapping Terminal		1
66	TAJ271307-0B	Jack Ass'y	for PIN & DIN Jack	1
	TAA305459-01	Circuit Board	for Jack Ass'y	1
67	T80483-00C	Slide Switch	S106,206 for Muting	1
68	TFB305310	Button Frame		1
69	TAJ305307-02	MIC Jack Ass'y		1
70	QSS2325-004	Slide Switch	for Voltage Select SW, CD-1920E	1
71	TFB320401-01	Bracket	〃 CD-1920U	1
72	QMC0306-001	Plug Ass'y	CD-1920U	1
	QMC0733-004	Jack Ass'y	〃	1
73	LPSP3008Z	Screw	for Voltage Select SW, CD-1920U	2
74	SDSC3006Z	〃	for Circuit Board (Main, Peal Level, ANRS, Power Supply)	16
75	SBSB2606Z	Tapping Screw	for Indicator C. Board	2
76	SBSB3006Z	〃	for Push Button Bracket, REC Bracket Ass'y, Rear Bracket, Front Panel, Lamp Holder, Front Bracket, Lapping Terminal	27
77	DPSP3006ZS	Screw	for Spring Bracket	1
78	DPSP4006ZS	〃	for Power Transformer	2
79	LPSP2004Z	〃	for Muting Switch	2
80	LPSP2604Z	〃	for Switch Bracket, BKT	5
81	LPSP2606Z	〃	for Lock Arm Ass'y	3
82	LPSP3006ZS	〃	for Power Switch, Push Switch	4
83	LPSP3016ZS	〃	for Jack Ass'y	2
84	SPSP2005Z	〃	for Cds Circuit Board	2
85	SPSP3016ZS	〃	for Foot	4
86	SDBP3008NS	〃	for Bottom Cover	6
87	REE2000	E Ring	for Bracket, Brake Pipe Ass'y Brake Shaft, Brake Arm	4
88	REE2500	〃	for Shaft	2
89	REE3000	〃	for REC Arm (1)	1
90	REE4000	〃	for Push Button Arm, REC Arm (2)	3
91	T30300-121	Spring	for Lock Arm Ass'y	1
92	〃 -111	〃	for Bracket	1
93	〃 -152	〃	for REC Arm (1)	1
94	〃 -154	〃	for Spring Bracket	1
95	T30301-105	〃	for Push Button	6
96	WNB3000N	Washer	for Bottom Cover, Lug	7
97	WSS3000B	〃	for Foot	4
98	Q03093-102	〃	for Cover	4
99	T30300-134	Spring		1

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